

MODERN PACKAGING

AUGUST 1957

*The metal collapsible tube, first
convenience package, fills
a role that defies competition*

COMPLETE CONTENTS p. 2





LAP-LOK®

CORNER LAP GLUE



makes every shipping case a better salesman

LAP-LOK, National's resin corner-lap glue, makes cases more attractive. Smoother. Neater. Frees the entire case surface for sales messages.

Safer too. LAP-LOK strengthens the case. Allows no fractional-inch-give to cause breakage. No jagged metal ends scuff labels or tear contents. Shipping—and handling—are easier for everyone.

LAP-LOK withstands heat, cold, moisture. As proven by over three years' usage in the field. Dries to a clear transparent film. Leaves no unsightly squeeze-out. Odorless. Write for data and sample.

RESYNS®

National

ADHESIVES

NATIONAL STARCH PRODUCTS INC.

270 Madison Avenue, New York 16 • 3641 So. Washtenaw Avenue, Chicago 32 • 735 Battery Street, San Francisco 11

Tailor-made carton service by Gair



Gair produced a billboard for 20 Mule Team Borax—product identity, bold and bright on clear white board. Brand name selling with a climax of rich color by Gair!



Gair's clean, clear letterpress printing on white clay-coated board sells this bourbon decanter for Beam. Strong Beam identity close-up and at a distance!



Gair packaging helps sell a new line of Howard Johnson pies in a new line of hi-speed waxed cartons. Quick as a wink, Gair sells appetite-appeal and product identity with vibrant color.

Gair has a proven flair for creating cartons that sell. Gair Service is also a proven asset to satisfied customers everywhere. Discover how *your* product can be even more of a prize in a package by Gair—call your Gair representative or write Gair, today.



GAIR

creative engineering in packaging



BOXBOARD AND FOLDING CARTON DIVISION OF CONTINENTAL © CAN COMPANY
530 FIFTH AVENUE, NEW YORK 36, N. Y.

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Modern Packaging Executive and Editorial Offices, 575 Madison Avenue, New York 22, N.Y.

Modern Packaging published monthly by Modern Packaging Corp., at Emmett St., Bristol, Conn. Modern Packaging Encyclopedia Issue published as second issue in November by Packaging Catalog Corp. at Emmett St., Bristol, Conn. Second-class mail privilege authorized at Bristol, Conn. Subscription rates (including Modern Packaging Encyclopedia Issue, which is not sold separately), payable in U.S. currency: In U.S., its possessions, and Canada, 1 year \$7, 2 years \$12, 3 years \$17; all other countries, 1 year \$20, 2 years \$35, 3 years \$50. Single copies 75 cents each (Show Issue, \$1) in U.S., its possessions, and Canada; all other countries \$2 (Show Issue, \$2.50).

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Another **FIRST** from Gilman...leader in plastic sheet for the Vacuum Forming Industry...**FIRST** to introduce a decorated sheet...**FIRST** to produce a scratch resistant styrene sheet that retains the original grain after forming.

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- LUXURY PACKAGING...
- PROTECTIVE PACKAGING...
- ANTI-TARNISH PACKAGING...
- DELICATE INSTRUMENT PACKAGING...

Stylour*

**PLASTIC SHEET
FLOCKED
BEFORE FORMING**

Write for further information...

THE GILMAN BROTHERS COMPANY
ESTABLISHED 1897 • GILMAN, CONNECTICUT



*Trade Mark

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MODERN PACKAGING

Why Imports?

The United States is generally regarded as the world leader in packaging and a country virtually unlimited in its material and mechanical resources. So it is interesting to note that in 1955 we spent \$11,093,253 abroad for containers, packaging materials and packaging machinery.

While the figure represents a fraction of 1% of our total expenditure for these packaging supplies, it is close to the highest ever for imports, being exceeded only slightly by the figures for the Korean war years, when there was an understandable scramble for anything from anywhere at any price. The fact that the import figure has not declined appreciably during the last three years, in a period of abundance, may have significance.

In fact, the 1955 import figure represents an increase of \$346,168 over the previous year and among those materials showing the largest increases were such common commodities as cellophane (up 254% in value) and aluminum foil (up 77.5%).

As far as cellophane and foil are concerned, the turning to foreign sources may be accounted for by continued imbalance, in 1955, of U. S. production and demand. The cellophane picture ought to be different this year. But aluminum foil bulks very large in imports, accounting for nearly \$3 million out of the \$11 million 1955 total.

In several categories out of the 21 covered by a Department of Commerce study of packaging imports reaching back to 1938, the suspicion exists that foreign factories can do it better or cheaper—or both.

As recently as 1950 our imports of packaging machinery and parts amounted to only \$304,000; in 1952 the figure jumped to \$872,236, and in 1955 it was \$874,801. Domestic machinery builders say it is difficult to compete with foreign wage rates. But there is something to be said, too, for the high quality of British, German, Swiss and Swedish packaging machinery and for the willingness of makers in those countries to meet the new and special needs of American packagers.

Sizable increases in imports were shown in 1955 in such relatively abundant packaging supplies as folding paper boxes, glass containers, bottle caps and collapsible tubes.

In the broad view, we do not decry the relative trickle of American packaging dollars going abroad. Our exports still far outweigh our imports and a better balance would be desirable. But we think there is, in the trend of these figures, a suggestion to American suppliers that, in their own interests, they ought to take a hard look at the job they are doing and see if business is slipping away from them by default rather than by virtue.

The Editors



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Most customers of the Maine Potato Bag Company insist on Dobeckmun polyethylene. H. N. Aldrich, Sales Manager, says: "None can compare with Dobeckmun. Most of all we like the printing and the quality of Dobeckmun's polyethylene bag."



Packages for performance...



Dobeckmun polyethylene wraps up a performance every time. This versatile, practical packaging film sells to the eye...

promotes... protects. For teddy-bears and tablecloths, bonbons, bedspreads and poultry, too, its high gloss presents your product

at its best, adds lustre to your brand name and selling message. Dobeckmun polyethylene is rigidly controlled from the basic resin

to the finished bag to create the ultimate in transparency.

Dobeckmun printing on polyethylene is unmatched. From the first idea

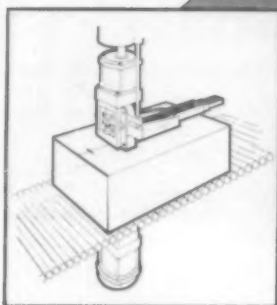
to the actual printed polyethylene package, your product, with all its potentials—is packaged for performance by

The Dobeckmun Company, Cleveland 1, Ohio; Berkeley 10, Calif.

Offices in most principal cities.



Two heads
are better
than one!



International's Dual Stapler Proves It!

..... with **TWO** Stapling Heads
for *Simultaneously and Automatically Closing*
Up to 1000 Carton Tops and Bottoms Per Hour!

IN LESS than 3 seconds—and *once* through—the International Dual Stapler will securely staple both the top and the bottom of your cartons.

And it does the job from the *outside*, after the carton has been filled! Doesn't make any difference, either, whether the contents are fragile dishes or rugged motors. Gentle as a kiss, the Dual Stapler can be tailored to staple just the way *your product* demands . . . because an easy adjustment permits anything from a full clinch to a blind (half-way through) clinch.

Quick as a wink, too, the Dual handles up to a *thousand cartons per hour*—with automatic efficiency.

There are lots of other advantages in time, space, and labor that your International Representative would like to demonstrate to you. Write for his name.



International Staplers

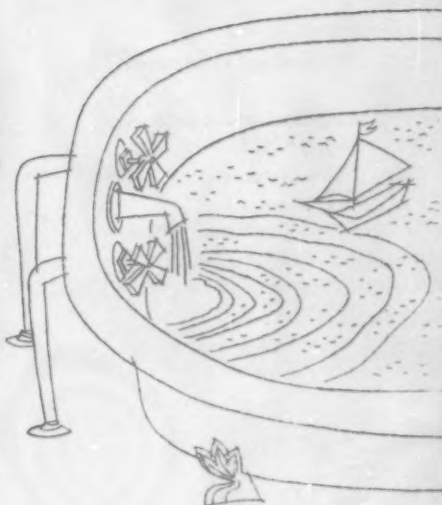
INTERNATIONAL STAPLE & MACHINE COMPANY

ORIGINATORS OF CARTON CLOSING STAPLERS

800 E. HERRIN STREET

HERRIN, ILLINOIS

Rub-a-dub-dub ALARM CLOCK'S IN THE TUB



Protected by **GER-PAK**[®]

Polyethylene sheeting and tubing

Here's a homemade torture test we tried with our 8 day clock — and we invite you to try the exact same test with your own product . . . to dramatize the great packaging gains you can achieve with Ger-Pak polyethylene film! For Ger-Pak gives full protection — *dependable* protection . . . against water, grease, acids, alkalis, dust and bacterial contamination. The tough, chemically inert film stands

up against heavy abuse — and helps cut packaging costs to the bone . . . especially if you switch to the new lightweight shippers with Ger-Pak Liners.

You'll find it easy to use Ger-Pak. This pure, uniform gauge polyethylene film is available in tubing and flat sheeting in any required widths and unlimited lengths. For full information, please write.

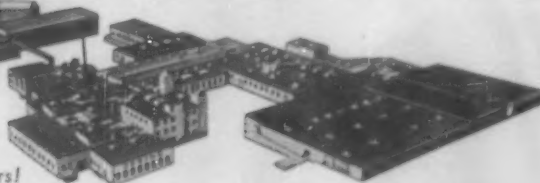


POLYETHYLENE FILM

GERING PRODUCTS, INC.
KENILWORTH, N. J.

Pioneers in modern plastics for over 30 years!

Service • Quality • Dependability



Burrry's

has a reason...

Keeping deluxe cookies tasting just as good out of the box as out of the oven is a job for waxed glassine. And the eye appeal of Burrry's white waxed glassine inner liner, printed in gold, sure sets the taste buds a goin'.

Protected by Riegel means much more... a complete, *engineered* system of packaging:

Product protection *always*, plus...

Paper tailored to run at high speed on automatic machines.

Paper made to your own specifications... plain, laminated, waxed, poly-coated, printed.

Paper that is made right, that will run right, that is priced right.

Hundreds of today's best-sellers benefit from Riegel's uniformly effective system of product protection. You can, too.

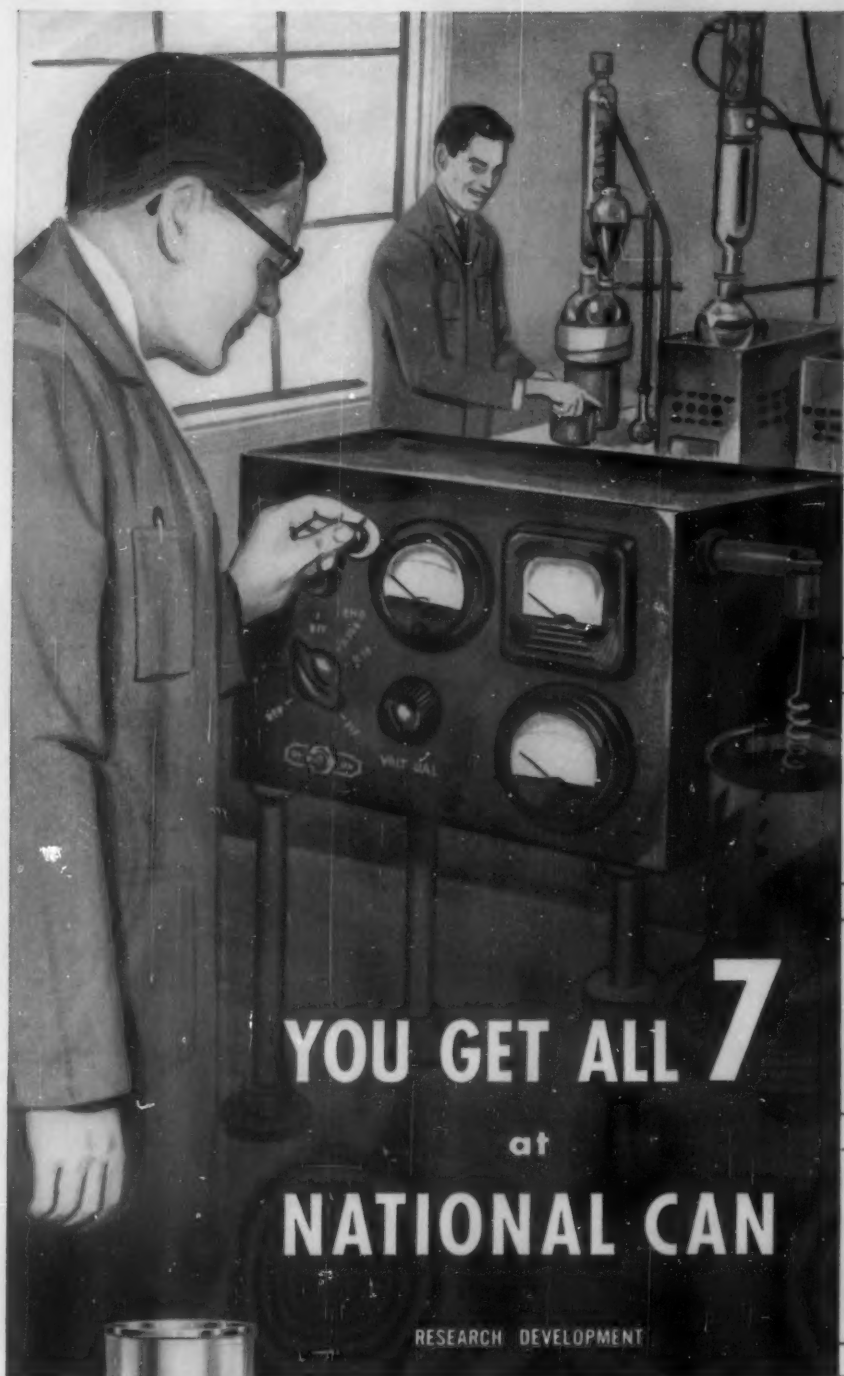
Write Riegel Paper Corporation, 260 Madison Avenue, New York 16.

Riegel

PROTECTIVE PACKAGING PAPERS



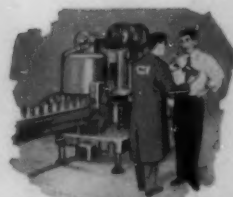
Burrry's new Masquerade assortment of French cookies uses a printed inner liner of Riegel's opaque waxed glassine.



...and much more, too! SERVICE — National Can Style... has come to mean a personal interest based on your needs! Why not let us survey your needs — you'll see how much MORE you get from NATIONAL CAN.

NATIONAL CAN
C O R P O R A T I O N

CHICAGO • NEW YORK • SAN FRANCISCO... PLANTS FROM COAST TO COAST



CLOSING MACHINERY



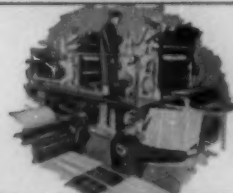
ENGINEERING



DESIGN



SALES SERVICE



LITHOGRAPHY



PRODUCT RESEARCH



Handsome label can't wrinkle or peel

Even long exposure to bathroom humidity can't mar the beauty of this Pyrocolor® label.

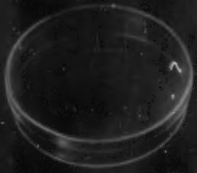
The ceramic enamel label is fired on . . . and actually becomes part of the glass. It saves a separate labeling operation . . . and it's on for the life

*TRADE-MARK

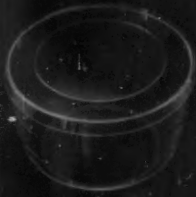
of the product. Its smooth, cleanly defined letters contrast pleasingly with the pure white of the product. The color of the Armstrong cap, too, is designed to match the pink of the label. Armstrong Cork Company, Lancaster, Pennsylvania.

Armstrong PACKAGING

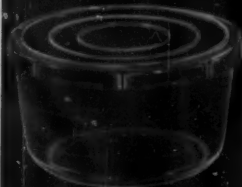
WATCH ARMSTRONG CIRCLE THEATRE EVERY OTHER TUESDAY EVENING ON NBC-TV



No. 32 diam: 2 $\frac{3}{4}$ " x $\frac{5}{8}$ " deep



No. 10 diam: 3 $\frac{1}{4}$ " x 1 $\frac{1}{4}$ " deep



No. 12 diam: 3 $\frac{3}{4}$ " x 2 $\frac{1}{4}$ " deep
(Plastic Snap-on Cover)



No. 15 diam: 3 $\frac{1}{2}$ " x 1 $\frac{1}{4}$ " deep



No. 210 diam: 3 $\frac{1}{4}$ " x 1 $\frac{1}{4}$ " deep
No. 211 (with Polyethylene Lid)

looking for a box that's round?



No. 42F diam: 3 $\frac{1}{4}$ " x 2 $\frac{1}{4}$ " deep
No. 21F diam: 3 $\frac{1}{4}$ " x 1 $\frac{1}{4}$ " deep



No. 415 diam: 3 $\frac{1}{2}$ " x 3 $\frac{3}{8}$ " deep
(Rigid translucent with clear lid)



No. 420 diam: 3 $\frac{1}{4}$ " x 2 $\frac{1}{4}$ " deep
No. 421 (with Polyethylene Lid)



No. 425 diam: 3 $\frac{1}{4}$ " x 3 $\frac{3}{8}$ " deep
(Polyethylene Lid only)

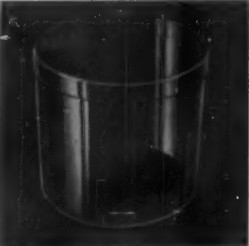


No. 72 diam: 3 $\frac{1}{2}$ " x 2 $\frac{1}{4}$ " deep

TRI-STATE is your source for



No. 52 diam: 4 $\frac{1}{4}$ " x $\frac{1}{4}$ " deep



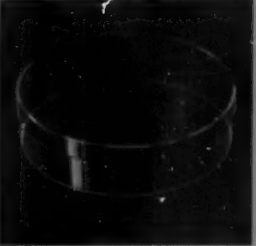
No. 190 diam: 5 $\frac{1}{4}$ " x 5 $\frac{1}{4}$ " deep



No. 56 diam: 4 $\frac{1}{4}$ " x $\frac{3}{4}$ " deep



No. 170 diam: 6" x 1" deep



No. 175 diam: 6" x 1 $\frac{1}{4}$ " deep

the world's largest assortment of



No. 180 diam: 6" x 2 $\frac{1}{2}$ " deep



No. 240 diam: 8" x 3" deep
No. 250 diam: 10" x 3 $\frac{1}{4}$ " deep



No. 24 2 $\frac{1}{4}$ " x 4 $\frac{1}{4}$ " x $\frac{1}{4}$ " deep
No. 54 2 $\frac{1}{4}$ " x 4 $\frac{1}{4}$ " x $\frac{3}{4}$ " deep



No. 84 2 $\frac{1}{4}$ " x 4 $\frac{1}{4}$ " x 1 $\frac{1}{4}$ " deep



No. C40 diam: 3 $\frac{1}{4}$ " x 2 $\frac{1}{4}$ " deep

Rigid Plastic Boxes...all shapes and sizes



No. C50 diam: 3 $\frac{1}{4}$ " x 5 $\frac{1}{4}$ " deep



No. C70 diam: 4 $\frac{1}{4}$ " x 5 $\frac{1}{4}$ " deep



No. C189 diam: 7 $\frac{1}{4}$ " x 7 $\frac{1}{4}$ " deep



No. 09 diam: 3 $\frac{1}{4}$ " x 3 $\frac{1}{4}$ " deep



No. 02 1 $\frac{1}{4}$ " x 1 $\frac{1}{4}$ " deep

TRI-STATE PLASTIC MOLDING CO HENDERSON 6, KY.

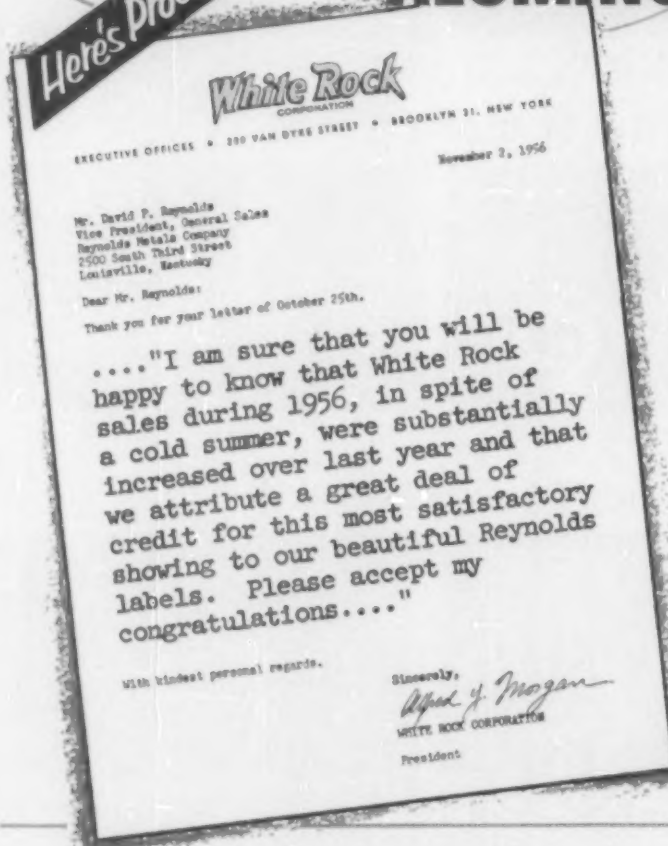


White Rock

adds sales sparkle to its
sparkling beverages with

REYNOLDS WRAP ALUMINUM PACKAGING

Here's Proof!



Inviting is the word for White Rock Beverages...on the market shelves and in the home. And the sparkling labels are an important part of the invitation...a tempting array of colors, gleaming with the beauty of Reynolds Wrap Aluminum Packaging.

These labels provide instant brand identification...and, by color variations, instant flavor recognition. They're highly water resistant...won't soak off under wet refrigeration.

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For Protective Packaging, Take Advantage of this Powerfully Promoted Seal!

More and more products are using the Reynolds Wrap Aluminum Packaging Seal to identify Quality Protection. And surveys prove more and more women recognize and look for this identification. Powerfully promoted in national magazines, on TV, in spectacular displays.



REYNOLDS ALUMINUM

See "Circus Boy", Sundays, NBC-TV. Watch for Reynolds on "Disneyland", ABC-TV Network.

Shining examples of
REYNOLDS WRAP ALUMINUM PACKAGING—
reproduced on the only material that can
duplicate their brilliance: Reynolds
Aluminum Foil.



AUTOMATION

makes Gibbs
rigid plastic boxes
cost less!



It's simple arithmetic! 100% automation accelerates production, cuts overhead, brings prices down to the level of many, not just the few. 100% automation means other advantages too. **A better container:** diamond brilliance that enhances your product, snug lids that really protect. **An efficient container:** nesting cuts shipping costs, warehousing, makes automatic filling and capping a cinch. **Prompt delivery:** America's most modern injection molding plant speeds that order to your filling line in less time. The six Gibbs containers shown here, available in clear and colored polystyrene, with polystyrene or polyethylene lids, enable many more products to afford the promotional and protective benefits of rigid plastic boxes. Imprinting available, up to 3 colors, on lids or sides of containers.



For samples, quick service, quality boxes, low quotes, call or write:

GIBBS AUTOMATIC MOULDING CORP.

Henderson 3, Kentucky Valley 6-9573

Chicago: 500 N. Dearborn St. St. Louis: 4030 Chouteau Ave.

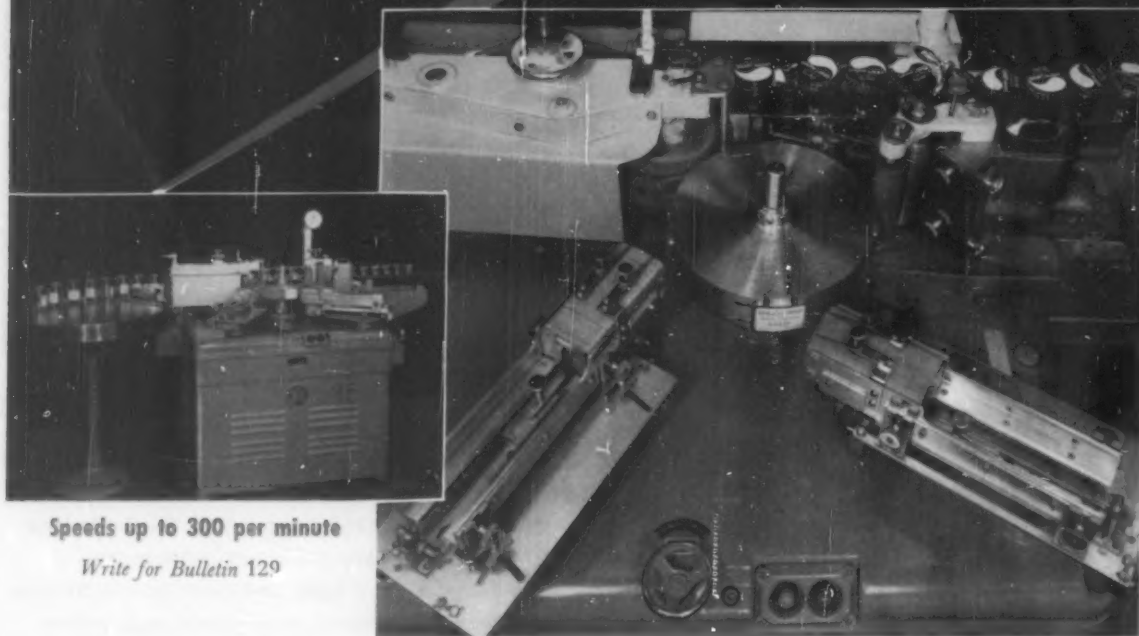
New York: 95 W. 42nd St.

*Polyethylene lids only

Lightning Labelers

DESIGNED FOR TOP SPEED APPLICATION

on round containers



Speeds up to 300 per minute

Write for Bulletin 129

Operating on an all mechanical, constant motion principle, these machines speed the labeling operation through their simplification of design and their own uniquely direct method of application.

A helical intake feeds and spaces the containers which travel straight through on a platform chain conveyor.

From a vertical gluing roll a uniform film of adhesive is transferred to segments of a glue cylinder. These glue faced segments then "pick off" labels from the reciprocating magazines. The glued labels are directly transferred to the containers by means of a

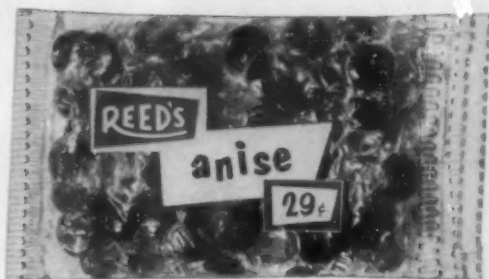
rotating transfer cylinder. The containers then roll between pressure belts and a stationary pad which properly "wipes" down each label.

Straight through without stop or pause — that's the answer to the Lightning Labeler's (1 and 2) smooth, uninterrupted delivery of containers with accurately registered, smoothly adhered labels. If your container is round, the Lightning's a machine you should look at, by all means!

PNEUMATIC SCALE CORP., LTD., 82 Newport Avenue, Quincy 71, Massachusetts. Also: New York; Chicago; Dallas; San Francisco; Los Angeles; Seattle; Leeds, England. Canadian Division: Delamere & Williams Company, Ltd., Toronto.



Packaging and Bottling Equipment



REED'S new line
is packaged by
Cellu-Craft...

SALES SOAR!



PROBLEM: The REED CANDY COMPANY wanted a line of packaged candies that would boost jobber-wholesaler sales... capture a good portion of the consumer market.

SOLUTION: Call in Cellu-Craft to design and produce the new line of packages.

RESULT: A steady rise of sales at all levels... whole-sale, retail and consumer!

RECOMMENDED: Do the same for *your* product and *your* sales. CALL FOR A CELLU-CRAFT PACKAGING CONSULTANT TODAY!

CELLU-CRAFT
PRODUCTS CORPORATION

Designers, Converters and Color Printers of Flexible Packaging Materials

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PRINTED CELLOPHANE • POLYETHYLENE • PLIOFILM • FOIL • ACETATE • In ROLLS • BAGS • POUCHES • ENVELOPES • SHEETS

THAT LITTLE EXTRA...



MEANS SO MUCH... in Metal Packaging

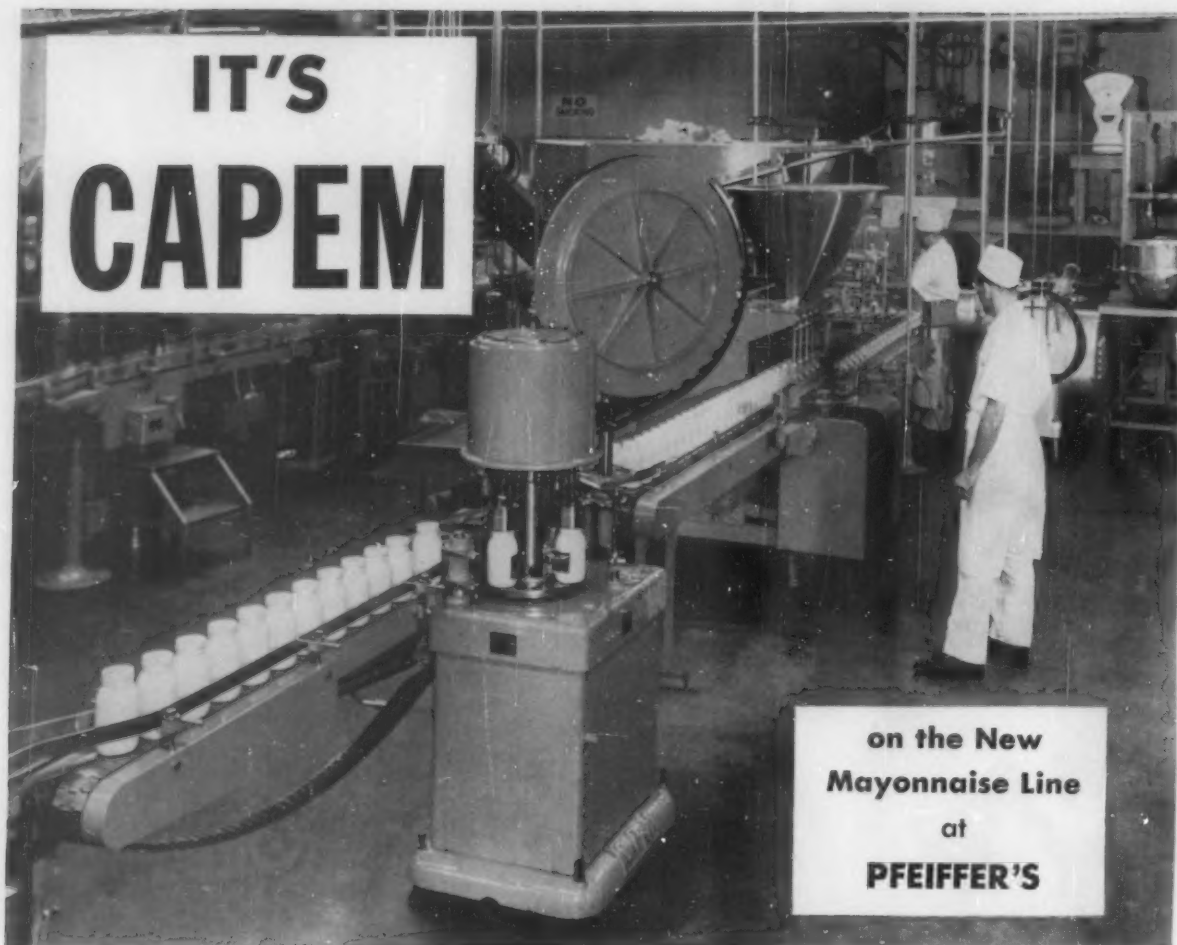


Fifty-six years of metal packaging experience becomes an integral part of your business when your product is packed in a metal can from Heekin. All of the economies and advantages of product planned can production, design, color, sales appeal and development are yours with Heekin Product Planned Cans. Remember... Heekin Personal Service is as close as your telephone.



THE HEEKIN CAN CO. PLANTS IN OHIO, TENNESSEE & ARKANSAS—SALES OFFICES; CINCINNATI, OHIO; SPRINGDALE, ARKANSAS

IT'S CAPEM



on the New
Mayonnaise Line
at
PFEIFFER'S

Pfeiffer Food Products, Inc. have recently installed a new mayonnaise and salad dressing line in their Buffalo, N.Y. plant. For the capping operation on this new line they selected a Consolidated CAPEM, Model C-4-F. This machine has a capacity of 120 caps per minute on small, medium and large caps. It handles jar sizes ranging from 6 oz. to quarts.

This Pfeiffer machine incorporates a special Consolidated chuck-arresting device which prevents the chuck dropping over the jar if no cap is present. Thus, the mayonnaise never comes in contact with the chuck parts. Split quick-change star wheels and an adjustable cap disc are also

provided to speed up changing from one jar size to another.

Have you considered the advantages of Consolidated cappers for your own capping operations? They apply any type of standard screw cap or cover at speeds of 2000 to 18,000 per hour . . . Handle jars, cans, bottles or jugs of any size or shape . . . Deliver a perfect, LEAK-PROOF seal at low cost . . . Available in 1, 2, 4, 6, 8 and 10 spindle models.

For recommendations on improving your own capping operation, address Sales Manager, Consolidated Packaging Machinery Corp., 1400 West Avenue, Buffalo 13, N. Y. A representative will get in touch with you.

CAPEM — THE MODERN SCREW CAPPER

These goods sell on sight . . .

in CELLOPHANE



B.C.L.
in POLYTHENE



in ACETATE



BRITISH CELLOPHANE LIMITED

SPECIALISTS IN FLEXIBLE TRANSPARENT PACKAGING MATERIALS

Commercial Office:- 12-13, CONDUIT STREET, LONDON, W.1, ENGLAND

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New Zealand, Pakistan, Northern Rhodesia, Southern Rhodesia, Trinidad and Tobago, and the Union of S. Africa



Save on wall thickness!
Because of the greater strength of Marlex 50 compared to conventional polyethylene, less resin is required to achieve desired rigidity in any item.

Marlex* 50 Gives You More Items Per Pound of Resin

MARLEX makes it possible for you to manufacture stronger products from less material . . . and because MARLEX sets up at higher temperature, you can achieve faster production. These are important manufacturing economies.

Greater strength, greater ability to withstand heat and cold, superb resistance to penetration by moisture, gases, oils and chemicals . . . all these qualities make possible the manufacture of many new and better products from MARLEX. Write your nearest Phillips Chemical Company office for further details.

*MARLEX is a trademark for Phillips family of olefin polymers

MARLEX 50

Phillips New, Rigid
POLYETHYLENE

PLASTICS SALES DIVISION PHILLIPS CHEMICAL COMPANY

A Subsidiary of Phillips Petroleum Company, Bartlesville, Okla.

DISTRICT OFFICES

NEW ENGLAND
322 Waterman Avenue,
East Providence 14, R. I.
Glenn 4-7400

NEW YORK
88 Broadway, Suite 2535
New York 5, N. Y.
Digny 4-3400

AKRON
318 Water Street,
Akron 8, Ohio
Franklin 6-4124

CHICAGO
111 S. York Street,
Elmhurst, Ill.
Terrace 4-6600

WESTERN
330 Security Bldg.,
Pasadena, Calif.
RYan 1-6997

SOUTHERN & FOREIGN
Adams Building,
Bartlesville, Oklahoma
Bartlesville 6400

ERIEZ PRESENTS THE FEEDER YOU HELPED DESIGN!

Before Eriez engineers designed this new vibratory unit, they went right to the people who use feeders and asked them to list the features they'd want in a feeder. The result is this outstanding vibratory feeder—the most efficient, most dependable unit that engineering skill has yet produced—a feeder based on new concepts in mechanical design and construction materials.

Accurate, controlled feed of bulk materials from ounces to tons per hour—automatically!

For all types of materials

Dry, hot, dusty, lumpy, abrasive, etc. Conveys, spreads, agitates, separates, blends, dries, cools and mixes bulk materials economically and in little space. New, rectangular-shaped tray produces uniform feed without "front end flip" or rear "dead spots." Compact base; feeders can be used in tandem or side-by-side applications. Has firm, stable mounting . . . or can be mounted without the base, directly on a component.

**HI-VI's operating principle;
no rectifier needed!**

Operating at 3600 CPM directly off an AC line, this new feeder needs no rectifier; just plug or wire it in.

The heart of the Eriez HI-VI drive system is a lifetime-powered Alnico V magnet. This magnet replaces the rectifier, in effect, by providing an automatic, inherent magnetic rectification system which is simple, trouble-free and highly efficient. All energy (a two-way push-pull vibrating action) goes for productive performance. Only Eriez vibratory feeders have this exclusive "two way" action!



ERIEZ . . . pioneers and world's largest producer of permanent non-electric magnetic equipment for industry, has three major product lines to serve your needs: **HI-POWR MAGNETIC SEPARATORS**—to remove unwanted iron from processing lines of all kinds. **HI-POWR MAGNETIC AUTOMATION UNITS**—to solve numerous materials handling problems . . . convey, transfer, control, elevate, re-position, etc., ferrous materials or parts during many manufacturing processes. **HI-VI VIBRATORY EQUIPMENT**—Feeders, to move and accurately feed bulk materials; Unit (Bin) Vibrators, to keep bulk materials flowing evenly and smoothly through hoppers, bins, chutes, ducts, etc.

New HI-VI electro-permanent magnetic vibratory feeder has many of the features you asked for: greater output than other units of comparable physical size; totally-enclosed drive element; rust-proof, long-life spring; new design tray for more uniform feed; needs no rectifier!



Patent Pending

ENCLOSED DRIVE ELEMENT! NEW SPRING DESIGN!—The drive elements for this feeder are completely enclosed—no damage or loss of efficiency due to contamination by moisture or foreign materials. Special disc-shaped springs of bonded glass fiber have replaced the metallic leaf springs found in old-style vibratory equipment. Not subject to corrosion, "packing," fatigue or other critical characteristics of steel leaf spring systems, glass fiber springs will provide many years of dependable, trouble-free performance.

GREATER OUTPUT CAPACITY! Eriez' new vibratory feeder has a greater output capacity than other units of comparable physical size . . . gives you higher operating efficiency over broader operating ranges . . . lets you move more materials faster! Higher capacity percentage varies with the particular models in the line.

NOTICE THESE FEATURES, MANY OF THEM EXCLUSIVE!

Totally enclosed drive element • Long-life, disc-type glass fiber spring; can't rust • Greater capacity • Rectangular-shaped tray bottom for more uniform feed • Less sensitive to voltage change • Compact base doesn't interfere with tandem, side-by-side or back-to-back installations • Almost silent operation • Corrosion resistant • Larger, more powerful Alnico V magnet • No "airgap adjustment" needed • Units are lightweight, compact, easily installed • No sliding or rotating parts to wear • Low power consumption, maintenance and operating costs.

ERIEZ MANUFACTURING COMPANY
120-V Magnet Drive, Erie, Pa.

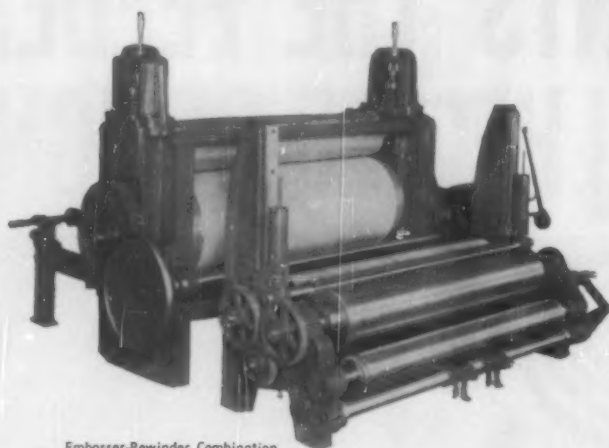
Please mail information on the new HI-VI vibratory equipment to:

NAME _____

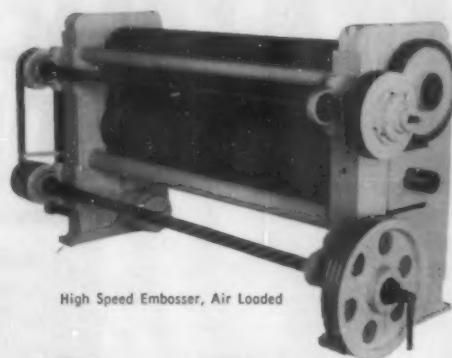
COMPANY _____

ADDRESS _____

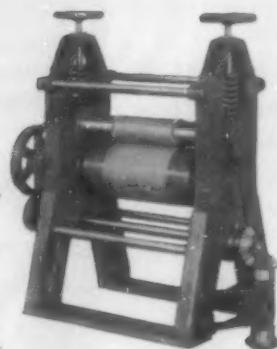
CITY _____ STATE _____



Embosser-Rewinder Combination



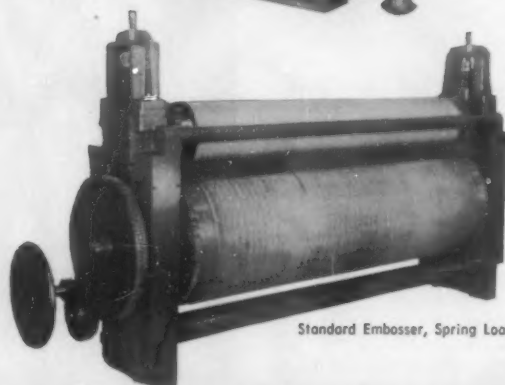
High Speed Embosser, Air Loaded



Small Special Purpose Embosser



Double Embossing Unit



Standard Embosser, Spring Loaded

**THESE EMBOSSERS ARE DELIVERING
THE PERFORMANCE WE PROMISED
... ask the companies that own them.**

printing presses, rewinders, embossers, folders,
napkin and core machines and special converting machines
PAPER CONVERTING MACHINE COMPANY
GREEN BAY, WISCONSIN





**Look what you
can do with it!**



HARD-TO-HANDLE materials, such as paper sheets in bulk, can be easily packaged using "Scotch" Brand Filament Tape. Super-strong tape both seals and reinforces covering.



LARGE cartons and expendable pallets are easily closed and reinforced with "Scotch" Filament Tape. Tape won't cut workmen's hands; won't harm contents; is easily disposed of.



MAKE your own containers for odd-sized or odd-shaped products with fibreboard padding and "Scotch" Filament Tape. "Mirror surface" adhesive sticks at a touch; holds securely.



SEND FOR free booklet showing how "Scotch" Brand Filament Tape can help solve your heavy-duty packaging and materials-handling problems. Write on your letterhead to 3M Co., St. Paul 6, Minn., Dept. EA-87.

World's strongest tape?

Even wrestler Bronko Nagurski can't break it! "Scotch" Brand Filament Tape is amazingly strong, super shock-resistant. Thousands of filaments imbedded in the pressure-sensitive adhesive give it up to 500 lbs. tensile strength per inch of width. Four colors: Red, Blue, Black, White and Transparent. Ask your regular tape distributor how you can use it for heavy-duty packaging, or write us direct. Always specify "Scotch" Brand, the *quality* tape . . . and stick with it!

FILAMENT TAPE . . . one of over 300 Pressure-Sensitive Tapes, trademarked . . .



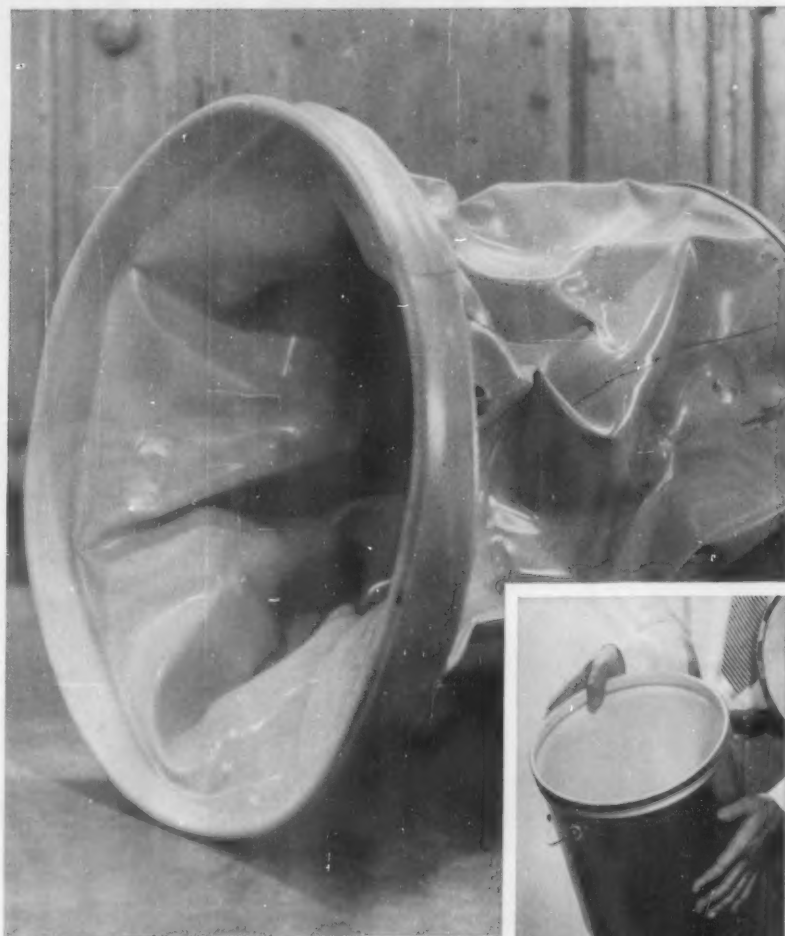
REG. U.S. PAT. OFF.
SCOTCH
BRAND

The term "Scotch" is a registered trademark of Minnesota Mining and Manufacturing Co., St. Paul 6, Minn. Export Sales Office: 99 Park Avenue, New York 16, N.Y. In Canada: P. O. Box 757, London, Ontario.



Another new development using
B.F. Goodrich Chemical raw materials

they
KO'd
*the drum—
 but not
 the coating!*



LOOK CLOSELY at this intentionally mangled steel drum. No cracks, flaking or peeling of the corrosion resistant coating—an organosol based on Geon polyvinyl resin.

Inland Steel Container Company offers this RDL-4 lining on drums and pails for handling highly corrosive liquids, bulk granulars and abrasive solids.

Linings made from Geon are remarkably resistant to abrasion, acids, alkalis and most chemicals. They are long-lasting, have excellent adhesion and high elasticity and are unaffected by temperature extremes or aging.

Geon-lined steel drums and pails

have already been proved successful as shipping containers for many materials. Some of these include: corrosive chemicals, aqueous non-solvent solutions, water emulsions, detergents, disinfectants, 50% lactic acid, phosphoric acid, slurries and abrasive materials like titanium sponge and slips for pottery.

You can put versatile Geon resins and compounds to work for you in many ways. For more details, write Dept. FW-4, B.F. Goodrich Chemical Company, 3135 Euclid Avenue, Cleveland 15, Ohio. Cable address: Goodchemco. In Canada: Kitchener, Ontario.

Inland Steel Container Company, Chicago, Ill. offers drums and pails with this lining in a range of sizes from 1 to 65 gallons.



B.F. Goodrich Chemical Company
 a division of The B.F. Goodrich Company

B.F. Goodrich

GEON polyvinyl materials • HYCAR American rubber and latex • GOOD-RITE chemicals and plasticizers • HARMON colors



For tubes of glue
ALCOA'S
INTROVERTED
NOZZLE...

Alcoa® makes this inner-crimped nozzle which closes with a screw eye for Barge Cement Mfg. Co., of Towaco, N. J. It prevents dripping after the screw eye is replaced in the tube. The crimp partitions the adhesive away from the nozzle tip.

Many Alcoa advances in aluminum collapsible tubes are like this one: they add little to the cost and a great deal to product performance and sales appeal. The collapsible tube is the most convenient package for many products. Alcoa can help you design exactly the proper tube for your product.




.....
Aluminum Company of America
1711-H Alcoa Building, Pittsburgh 19, Pa.

We are interested in packaging _____ in Alcoa Tubes.
Please have an Alcoa salesman contact us.

Name _____
Firm _____
Street Address _____
City and State _____

Your Guide to the Best in Aluminum Value



clear...
tough...
low cost

POLYFLEX

REG. U.S. PAT. OFF. MAR. CORP. LICENSED TO MONSANTO CHEM. CO.


STYRENE FILM AND SHEETING

MADE OF
DISTRIBUTED IN U.S. BY MONSANTO

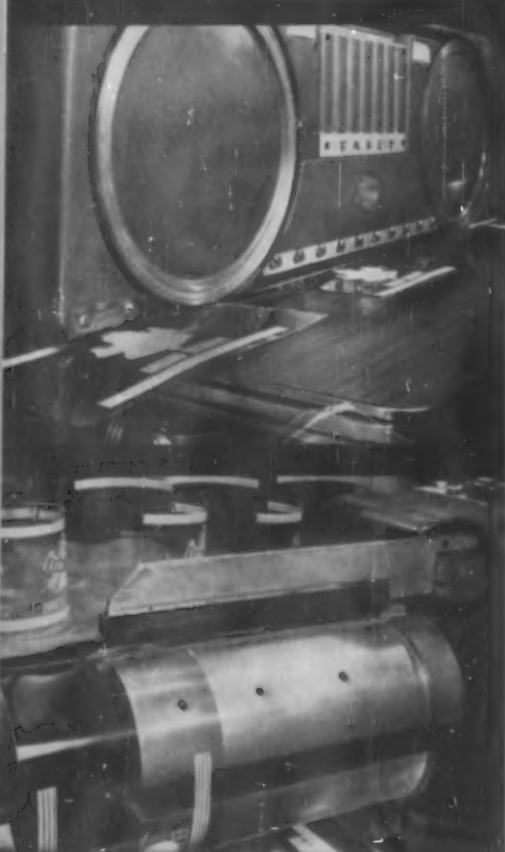
**MONSANTO
LUSTREX**

LUSTREX REG. T.M. MONSANTO CHEM. CO.

Specialty Plastics



*Polyflex 100
can be CREASED,
folded, blanked,
slit, sheeted,
cut-to-size . . .*



*BEADED,
embossed,
riveted,
drilled,
punched . . .*

*HEAT SEALED,
laminated,
cemented,
stitched*

...easy to fabricate

Standard procedure and equipment will produce a handsome variety of high gloss packages from Polyflex 100. This biaxially oriented styrene sheet—combining film thinness with sheeting rigidity and toughness—is water-clear, translucent or colored. Dimensionally stable over a wide temperature range. Light in weight for higher yield, lower packaging costs. Printable, non-toxic, low in water absorption. For samples and fabricating information, write Monsanto Chemical Company, Plastics Division, Room 3040, Springfield 2, Mass.

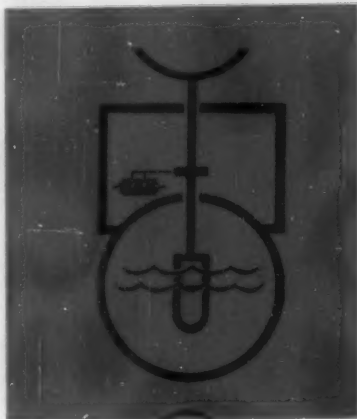
*Monsanto also supplies
polyethylene, styrene,
and cellulose acetate
for packaging applications.*



Beam scales and volumetric filling were used by Wright as early as 1893 in the first successful automatic machines for packaging smoking tobacco.

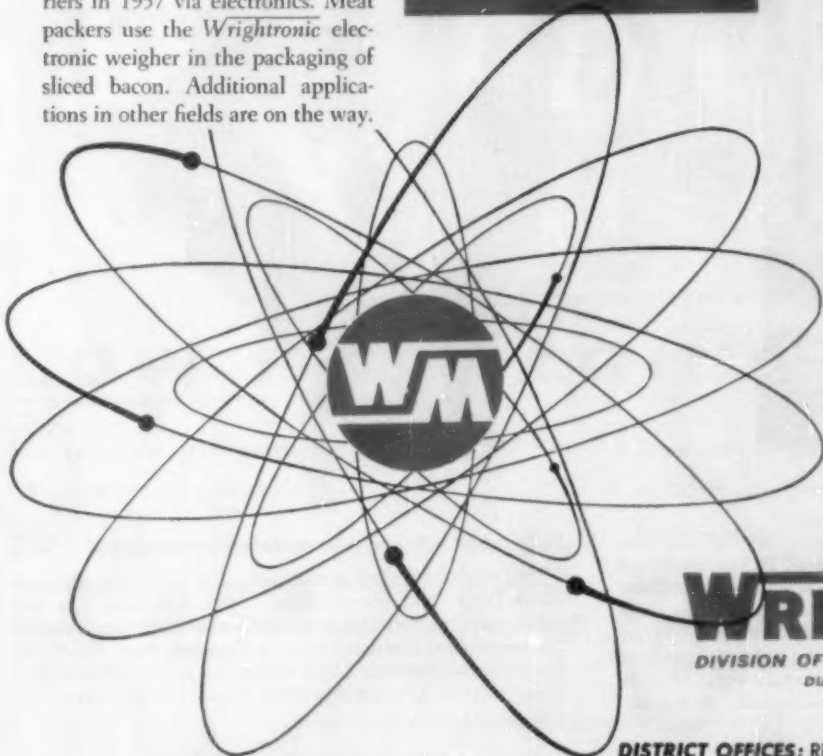
When conventional weighers failed to meet the requirements of potato chip makers, Wright developed a more sensitive, gentler, and faster method. Hy-Tra-Lec® utilizes the principles of positive displacement triggered by electricity. Now also widely used for packaging candies, crackers, cookies, pretzels, frozen foods, and similar products.

Wright leadership broke new barriers in 1957 via electronics. Meat packers use the *Wrightronic* electronic weigher in the packaging of sliced bacon. Additional applications in other fields are on the way.



WRIGHT LEADS IN WEIGHING PROGRESS

Constant research enables Wright customers to keep pace with automation and changing packaging trends. You can plan ahead with Wright. Your inquiry is invited.

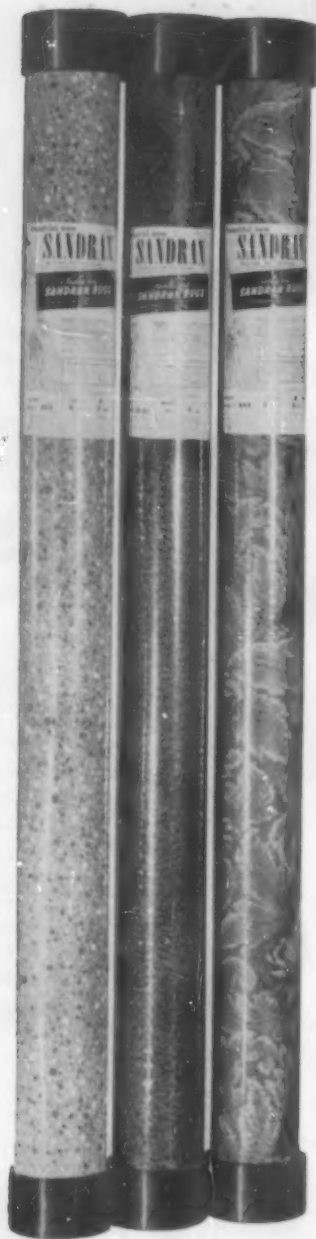


WRIGHT MACHINERY COMPANY
DIVISION OF SPERRY RAND CORPORATION
DURHAM, NORTH CAROLINA 

DISTRICT OFFICES: Ridgefield, N. J.; LaGrange, Ill.
Dallas, Texas; Durham, N. C.

CANADA: Sperry Gyroscope Ottawa Limited
Ottawa, Ontario, Canada

EXPORT DEPARTMENT: 13 East 40th Street, New York 16, N. Y. USA
Cables: ARLAB



Sandran floor
coverings in acetate
wraps *Talk Quality*



"One way to nudge a sales curve upward is to let your customer see for himself," says Mr. Samuel D. Pollock, Sales Promotion and Advertising Manager of the Sandura Company of Philadelphia, Pa. "Sparkling acetate wraps gave us the visibility we needed to talk quality in a highly competitive market . . . gave us the opportunity to talk our new line of floor coverings up to a million dollars worth of sales in less than one year—and starting from scratch—even overcoming a price disadvantage."

Again and again, Celanese acetate film proves its worth as a top-flight packaging material. Its crisp new look withstands the adverse conditions of long storage or display that rob other wraps of their sales appeal, their full visibility. Acetate resists cockling, shrinkage and brittleness to retain

its full selling impact—its sparkling transparency!

You can't find a better material . . . a non-aging film that stays bright and crystal clear . . . that can help you talk either quality, freshness or glamour—or all three! Celanese Corporation of America, Plastics Division, Dept. 108-H, 744 Broad Street, Newark 2, N. J. Canadian Affiliate: Canadian Chemical Co., Limited, Montreal, Toronto, Vancouver.

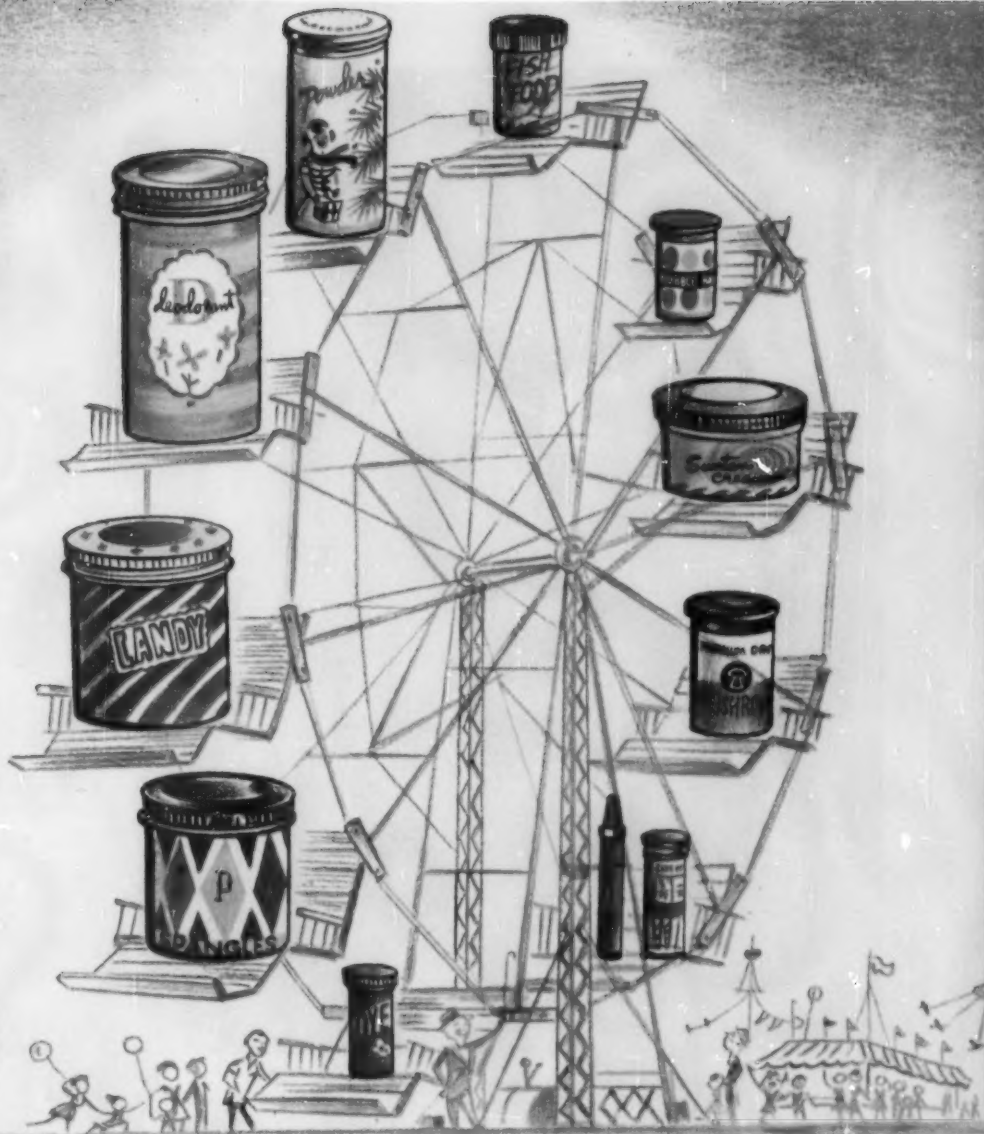
Celanese®

Celanese

PACKAGING FILMS

Export Sales: Amcel Co., Inc., and Pan Amcel Co., Inc., 180 Madison Avenue, New York 16, N. Y.

Get
a
BIG
SALES
LIFT
with



LOW PACKAGING COSTS!

You can give your product a new sales life with Clearsite plastic containers.

Cost is low because the chances are that among the wide variety of containers now being produced, there is one that will fit your need exactly—without mold costs.

Clearsite transparent plastic containers are shatter-proof—weigh about one-fifth as much as glass. Breakage and shipping costs are kept at a minimum.

Crystal-clear or jewel-like colors—Clearsite plastic containers are easily multi-color printed with your trademark or label.

Write for Free Samples and Descriptive Literature to Department A



Clearsite Plastic Vials and Jars *that Sell!*

CELLUPLASTIC CORPORATION

SALES AND EXECUTIVE OFFICES • NEWARK, NEW JERSEY



Picture of a man solving a tough packaging problem . . .

He's doing it the new way . . . he's given the job to Bemis Packaging Engineers.

What *is* his problem? Well, it really doesn't make much difference. Bemis engineers will be pretty sure to find an answer.

For example: Shipping protection for something fragile? "Float" it in a Bemis SHIP-SHAPE,* the form-fitted, featherweight, molded cellulose container.

A soft goods item that needs sales

"oomph," protection from soiling, and other merchandising benefits? Bemis plastic packaging . . . Bemis Flip-Close,* possibly.

A product of unusual shape or size, and difficult to package? Bemis Paper Specialty Engineers will come up with an efficient, money-saving answer.

Package filling-and-closing machinery that speeds production and cuts costs? *That's* the job of Bemis Packaging Service.

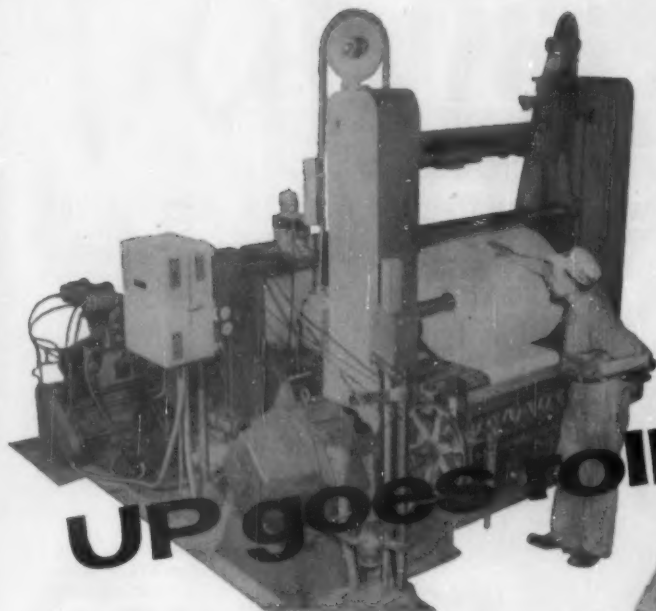
In short, to an amazing number of packaging problems, Bemis can contribute experience, facilities, know-how . . . and success. What's *your* problem? Write us.

*Trademark

Bemis

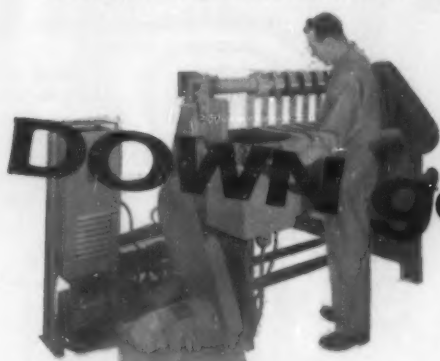


General Offices — St. Louis 2, Mo.
Sales Offices in Principal Cities



CAMERON 10 heavy duty slitter-rewinder

- ... score-cut or shear-cut slitting.
- ... speeds up to 2000 fpm*; widths 42" and 82"; rewind diameter to 40" maximum.
- ... surface rewind, with self-aligning riding roll to compensate for off-caliper stock.
- ... versatile handling of waxed, gummed, or coated paper or paperboard, textiles and rubber.



CAMERON 550 low-cost slitter-rewinder

- ... score-cut, shear-cut, burst-cut or draw-cut razor slitting.
- ... speeds up to 500 fpm*; widths to 62"; rewind diameter to 15" maximum.
- ... center rewind, differential type, with air-loaded core friction.
- ... for plastic film, foils, papers, laminates and other materials.

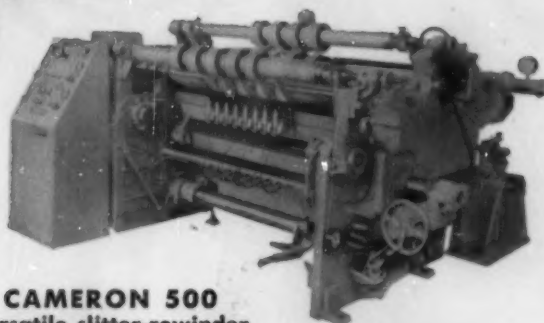
*Speed is dependent upon machine width, the number of cuts, and characteristics of material.

CAMERON Slitters and Roll Winders

Custom-engineered by Cameron specialists

- ... to meet all production requirements
- ... to produce rewound rolls of highest quality
- ... to assure trouble-free feeding in subsequent roll finishing, printing and converting operations
- ... to increase the sales appeal of roll-wound products made for end use.

UP goes roll quality!



CAMERON 500 versatile slitter-rewinder

- ... quick changeover from score-cut to shear-cut or razor-cut slitting.
- ... speeds up to 2000 fpm*, widths to 62"; rewind diameter to 20" maximum.
- ... surface and center rewind, differential type, with air-loaded core friction.
- ... for plastic films, foils, papers, textiles and laminated materials.

DOWN go your costs!

A SOUND INVESTMENT in slitting and roll winding equipment will pay three-fold dividends:

- ... it will attract profitable new business by producing rewound rolls that meet the highest standards of quality.
- ... it will cut roll production costs.
- ... it will protect profits throughout the depreciation period by providing the most advanced design and operating features available today.

CHOOSE WISELY with the help of Cameron specialists. Let us send free literature.

CAMERON MACHINE COMPANY • 61 Poplar Street, Brooklyn 1, N. Y.



BUILT BY CAMERON'S team of specialists

"Ed, what did you do about that contamination problem in the drums on the new line?"

"We purchased J&L containers with a new treatment of the steel surface recommended by their representative.

The problem's solved—they certainly talk our language."



- J&L specialists, backed up by modern research, are ready to consult on your toughest packaging problems.
- J&L, an integrated steel producer, controls container quality from start to finish.
- J&L steel containers provide engineered packaging for dependable transportation and safe storage.
- Precise fabrication and correct specification of fittings and closures.
- Prompt dependable delivery from nine plants.

Call your nearest J&L Container Division office for recommendations on your packaging problems. Or write direct to the Container Division, 405 Lexington Avenue, New York 17, N. Y.



Jones & Laughlin

...a great name in steel

WHY

AUNT JEMIMA

WEARS

NIBROC® White



The image shows a large bag of Aunt Jemima Buttermilk Pancake Mix. The bag features a portrait of Aunt Jemima, a Black woman wearing a headscarf with a diamond pattern, smiling. The text on the bag reads "Buttermilk PANCAKE MIX for waffles, too!". Below this, it says "NET WT. 3 1/4 POUNDS" and "MANUFACTURED BY The Quaker Oats Company ADDRESS: CHICAGO, U. S. A.". To the right of the bag, a young boy is sitting at a table, eating a stack of pancakes with a fork. The background is dark with a jagged, white, starburst-like border around the bag.

The Quaker Oats Company uses paper bags made of Nibroc White to package its world-famous Aunt Jemima Pancake Mix.

It helps "America's Favorite Aunt" display her beaming smile to utmost advantage. It makes the pancakes look appetizing, taste-tempting, real enough to eat right off the bag.

Strong, clean, bright and white, with excellent printing surface, it's perfect for any sales message. Important too: Nibroc White is completely adapted to bag forming, filling and closing machinery.

Whatever you package—flour, mixes, coffee, sugar, rice, cocoa, corn meal, dog food—you can upgrade your bag, boost its visibility with Nibroc White machine finish, supercalendered and/or embossed paper. Bring your problem to us. Write our Paper Sales Division, Dept. RD-8, in Boston.

BROWN  COMPANY

Berlin, New Hampshire

Paper Sales Division: 150 Causeway St., Boston 14, Mass.

®TM Reg. The Quaker Oats Company

BAGORAMA

9

Which of these
Equitable bag ideas
will help brighten your
profit picture?



1 Promote and protect your product in colorfully-printed, super-clear polyethylene bags. Equitable makes a full range of styles and sizes. New "Redd-E-Close 1" has built-in self-closure, permits feel inspection of contents and reclosure without destroying package.



2 They're "walking" posters! Picture the powerful promotional impact possible for your next consumer or trade event with this hard-hitting medium. Equitable's shopping bags offer advertisers a best-buy for size and color . . . repeat viewings galore!

ideas to



3 Consumer convenience wins good will, stimulates sales. The built-in handle bag invites shoppers to "take hold . . . and take home." Try Equitable's easy-carry "Take-Hold" bags to prepack hard-to-handle bulk items or multi-unit offerings of packaged goods.



4 Low-cost premiums. For kids: Halloween "trick or treat" bags. For men: protective multi-pocket polyethylene pouch for important papers, maps. For women: reusable poly storage bags. Equitable can print bags with recipes, premium offers, masks.

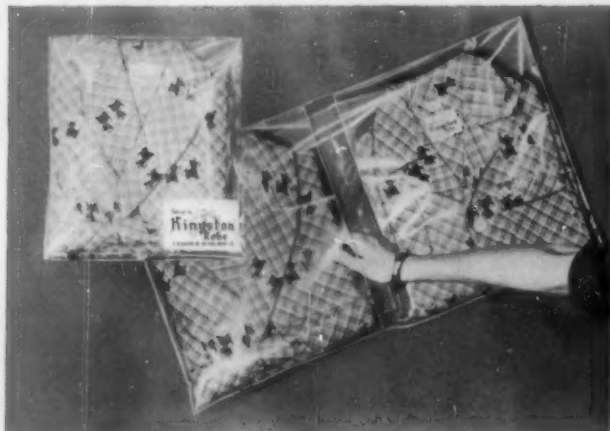


5 Promote brand identity with coordinated design packaging. Equitable supplies color and design matched bags in a wide range of sizes . . . small consumer units . . . large multiwalls . . . even master containers to ship smaller units at less cost.



8 For Christmas, Easter, and other gift events, stimulate sales with polyethylene bags printed with appealing designs to highlight your product for gift-giving. You can pre-pack in the plant or supply bags to outlets for "in store" packing.

promote more sales



6 More profit per sale . . . if you can market your product in multiple unit or related item assortments. Equitable's new multi-pocket "Pol-E-Pouch" is available with two to ten pockets . . . wide range of sizes . . . film of any gauge . . . printed in one to five colors.



9 Put more into your promotions . . . by spending less for envelopes. Save with Equitable's handsomely-printed "Modern Mailer" for large-scale mailings of catalogs, magazines, premiums, etc. Special construction reinforces tuck-in flap, locks contents more securely.



7 Retailer note: Shoppers will buy more if they can carry more, comfortably and stylishly. Make shopping in your store easier by supplying new self-opening "Hand-E-Bags" by Equitable. Your colorful message makes it a promotional as well as wrapping medium.

EQUITABLE
PAPER BAG COMPANY, INC.
45-50 Van Dam Street, Long Island City 1, N. Y.
Paper Mills and Southern Bag Plant: Orange, Texas

Use coupon for free samples and literature.

Equitable Paper Bag Co. Inc., 45-50 Van Dam Street
Long Island City 1, N. Y.

At no cost or obligation to me, send samples and information on item(s) checked below:

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐

MY NAME _____ TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____

Let's count the advantages

WHEN YOU USE
CORRUGATED SHIPPING
CONTAINERS BY
NATIONAL CONTAINER!



Assured Quality — the product of National's fully integrated chain of quality controls, extending from our own timberlands through pulp, paper, and board mills, to nation-wide converting plants.

Correct Design — National's design experts are ready to solve any corrugated shipping container problem — whether your products be perishable, fragile, heavy, or bulky.

Personal Service — personal interest! Though National Container Corporation is national in extent, National's service is local in practice, with an office near you for close attention to your interests.

Dependable Delivery — with raw materials, every step of production, design, and manufacture under one direction — promises are fulfilled; deliveries made as you direct.

63 Sales Offices . . . one near you. Phone today for consultation . . . no obligation!

NATIONAL CONTAINER CORPORATION

New York Office: 405 LEXINGTON AVENUE, NEW YORK 17, N. Y.

CORRUGATED PAPER CONVERTING PLANTS • Atlanta, Ga. • Aurora, Ind. • Bradford, Pa. • Bristol (Philadelphia), Pa. • Chicago, Ill. • Dallas, Texas • Detroit, Mich. • Jacksonville, Fla. • Long Island City, N. Y. • Los Angeles, Calif. • Madison (St. Louis), Ill. • Memphis, Tenn. • Miami, Fla. • Milwaukee, Wisc. • Newark, N. J. • Oakland, Calif. • Salisbury, N. C. • St. Paul, Minn.



Background

for

packaging

Notes,
quotes
and comments

What is your picture of the average American household to which your package is directed? The picture is changing rapidly. Of the 48.8 million households counted in 1956 some 29.3 million were in metropolitan (including suburban), 19.5 in non-metropolitan areas. Of the total gain of 5.2 million households from 1950 to 1956, about 4.6 million were metropolitan or suburban, only 0.6 million rural. Thus we see a rapid swing to metropolitan living, with all that that implies in changed shopping habits, more time outside the home and less in the kitchen, demand for prepared foods and other conveniences in packaging.

Interurbia is a new word in the lexicon of market planners, joining suburbia and exurbia. An example of interurbia is the almost continuous urban strip now extending 500 miles from Boston to Washington along the East Coast, joining both cities and their surrounding densely populated non-farm counties. According to a J. Walter Thompson study, there are now 14 such rapidly growing interurban areas in the country, accounting for almost half the country's population and more than half of retail sales—in less than 4% of the land area. By 1975, it is predicted, "interurbia" will include 60% of population and 70% of retail sales.

Prepared frozen foods, after a 35% increase last year, now represent a \$700 million business for 400 packers. The tally shows 400 million pot pies, 50 million prepared dinners, 60 to 70 million fruit pies, more than 320 million pounds of frozen potato products, 70 million pounds of fish sticks. One out of every three dollars spent by the consumer for frozen foods today, it is estimated, goes for a cooked or semi-prepared product.

'No matter how much we talk about 'building consumer franchises,' 'registering the brand on consumer consciousness,' 'building brand images,' 'creating impact' or any four other pet phrases, let us never permit the word 'belief' to be blurred or obliterated from our mind's eye. For if they don't believe us, we are lost."—*Grey Matter*.

Cellophane use will expand rapidly to take up production expansion programs now under way; the industry seems confident of that. DuPont looks for growth not so much in new applications as within present major fields of use. *R. C. Krueger*, DuPont's manager of converter sales, told the National Flexible Packaging Assn. that cellophane is "far from the saturation point" even in candy, crackers, snacks and other products which it now dominates. "In our opinion," said Mr. Krueger, "the market potential for cellophane is considerably in excess of the total cellophane capacity which should be in operation by 1959."

Great expectations of cellophane industry are based largely on polymer-coated (i.e., saran coated) cellophanes, which all three makers now produce. Two-side saran coating not only boosts product protection and aids handling and sealing, but actually protects the base film itself from drying and embrittlement. Introduction of a lighter, 300-gauge film by DuPont drastically improves price position. It appears that the saran coating will gradually displace the conventional nitrocellulose moisture-proof coating; some industry sources are saying that within five to 10 years the bulk of cellophane production will be polymer coated.

How big is packaging? Take just one segment: the soft-drink industry. Today it employs between 90,000 and 100,000 persons in its 5,000 plants and warehouses, uses annually more [Continued on page 40]

than nine million bottles, 219 million crowns, 23 million boxes and 843 million cartons. *Edwin F. Wagner*, president of the American Bottlers of Carbonated Beverages, predicts that in 10 years the industry will be producing close to 40 billion bottles of carbonated beverages annually, at a wholesale value in excess of \$1,700,000,000.

Change of policy in the Department of Commerce will restrict WOC's (executives from industry serving six-month terms without compensation) to advisory and assistant positions, reserving division director posts for Government career personnel. Incumbents are not affected, but as new appointments from industry are made, effective July 1, they will be only in positions as administrative advisers to directors, assistant division directors, branch chiefs and consultants.

A major development in the ferment over aluminum cans is Continental Can Co.'s announcement that it will begin test marketing of aluminum cans this fall. Predicting prices "quite a bit higher" than those of tinplate cans, the company expects initial applications will be to specialized, higher-priced products.

Don't count the tin can out of the picture. The truth is that, even if cost and other problems were solved, there just isn't enough aluminum available now to supply any major portion of can requirements. On the basis of an aluminum can half the weight of tinplate, it would take 2.3 million tons to switch the can industry entirely to aluminum at its current level of business—and that's more than 300,000 tons greater than the total 1956 supply of aluminum in *all forms*! Naturally, the aluminum industry isn't going to abandon its present markets; it will, however, fight hard to get a toehold in this enormous can field. A slice of business big to aluminum might be minor in ratio to the total can metal market.

Glass containers are running slightly ahead of 1956, for the cumulative period of January to May, in both production and shipments. May this year was substantially ahead of April. For the five months, production of all types this year was 59,531,000 gross, as against 58,196,000 gross; shipments were 55,628,000 gross vs. 55,315,000.

Note the campaign to get glass-packed food products into multipacks. Three of the biggest suppliers in this field now have special machinery and special cartons to show off multipacked glass packages to advantage and progress in this area in the next year is likely to be outstanding. Meanwhile, multipack designers learn to treat end panels as a major display surface; a survey shows that no less than 40% of multipacks are displayed in stores with only the end showing.

Questions as to the validity of a recent report linking premiums and deals as effective sales stimulants are raised by *John M. Cowan*, managing director of the National Flexible Packaging Assn. What, asks Mr. Cowan, are the facts on premiums alone and on deals alone? He thinks it quite likely that these separate promotional devices are actually exhibiting differing trends and suggests the need for sound research data on the benefits, costs and consumer reactions to stamp plans.


New evidence of the textile industry's serious interest in packaging is the formation of a Textile Packaging Committee within the Packaging Institute. An organization meeting has been held under the chairmanship of *James T. Covington*, packaging coordinator of Fieldcrest Mills. Like others, the textile packagers are finding that they must learn not only from each other, but from the broad experience of the packaging field.

Background

for

packaging

[Continued from page 39]



**Krafibre is different
from other boxboards**

for one thing . . . it's MUCH MORE VERSATILE!

Krafibre is adaptable to a multitude of special treatments. Available in natural, white lined and a rainbow of colors, Krafibre prints and handles beautifully. And costing less than any comparable board, it saves initial packaging costs.

Krafibre packages keep their fresh, smooth, "just-printed" attractiveness. The biggest difference between Krafibre and ordinary boxboards is where it counts the most — at the point of purchase!

40 Years of Progress



COLUMBIA

BOX BOARD MILLS, INC.
CHATHAM, N. Y.

Let us show you the difference! Drop us a line today and we'll rush you the Krafibre sample book so you can test and examine it yourself.

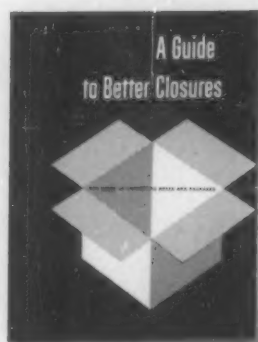
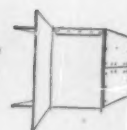
Please send me the new Krafibre Sample Book.

NAME _____
TITLE _____
COMPANY _____
ADDRESS _____
CITY _____ STATE _____
MY BOXMAKER IS _____



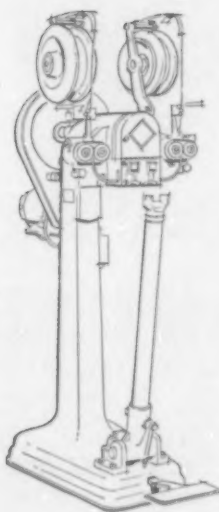
CLOSURE IDEA BULLETIN

For Users of Fibreboard Boxes



The box closure handbook, "A Guide To Better Closures", discusses the common box closure methods in a factual, easy-to-read sequence. This new handbook provides a background for making basic decisions on box closure methods. Send for your free copy today.

Large volume shippers who use stitched fibreboard boxes are discovering additional economies through the use of dual head box stitchers. These machines increase box closure production from 25% to 50% per man hour compared with single head machines. Three different types of Acme Steel box stitchers are now available with dual stitching heads. The dual heads drive twin stitches, side by side. Wire is drawn from two separate coils, cut, formed, driven and clinched simultaneously. One dual head machine is the post-type stitcher used for closing the bottoms of slotted boxes. The dual head, arm-type stitcher is used for fastening the sides and ends together on telescope or folding boxes.



Another dual head machine is the new Model H20AY developed especially for the beverage industry. This stitcher speeds assembly of three-piece beverage containers by driving two stitches at a time on a double unit straight arm.

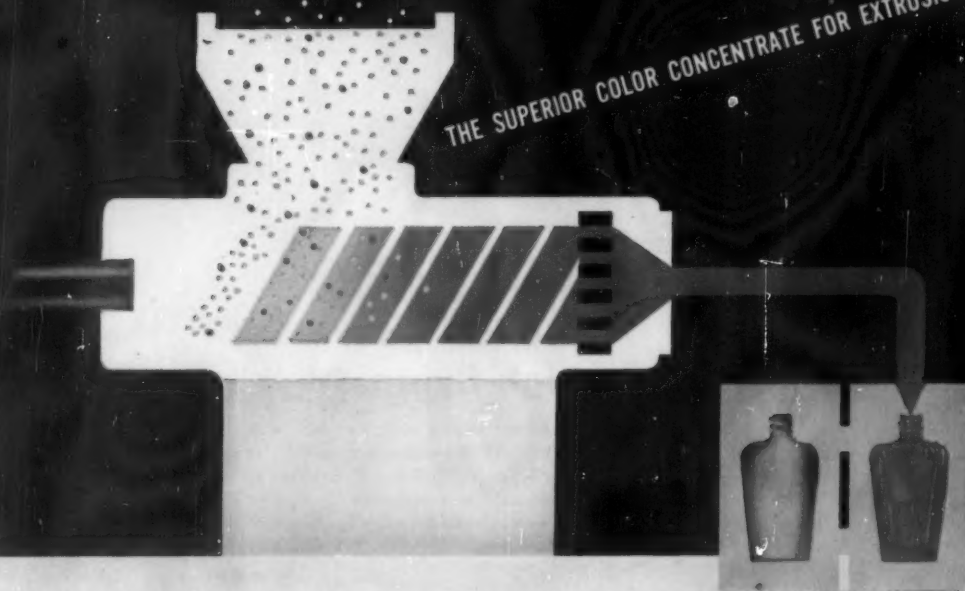
Box closure problems which look difficult to you may be routine to the Acme Idea Man. He will be able to draw on the 75 years Acme Steel Company has worked with wire stitchings as well as his own intensive experience.

Call for his help today. Write to Dept. MDW-87, Acme Steel Products Division, Acme Steel Company, Chicago 27, Illinois.

**ACME
STEEL** WIRE STITCHING

UNICOLOR*

THE SUPERIOR COLOR CONCENTRATE FOR EXTRUSION MOLDING



Here's the beginning of a swift and dynamic journey... **straight into the hands of the consumer.** If it's squeeze bottles you produce, or any one of a host of other finished products made from thermoplastic materials, you know that **COLOR APPEAL** is the most important factor in ringing up consumer sales. From pellet to product, **UNICOLOR** assures you of maximum-impact color in every single unit.

UNICOLOR is a resin color concentrate that forms a molecular bond with the thermoplastic involved. It is to be used at a ratio of **twenty-four to one.** The result is a uniformly finished color at the cost of a few pennies per pound.

As an organization of color experts, we at Westchester Plastics, Inc. are in the business of supplying thousands of specially matched colors in polyethylene and most other thermoplastic materials. Advise us of the resin you intend to use and the color you require. We will send you a sample for evaluation by your staff.

remember! it's the color that makes the **SALE!**



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Manufacturers and Developers of Unicolor and Formacolor






*Pilothen, Formacolor, Unicolor® T.M. Reg. U.S. Pat. Off.

Are Your POINT OF PURCHASE Labels for the birds?



Let **KLEEN-STIK**[®] feather your sales nest with high-flying, high-selling displays!

Sing your selling song with labels of moistureless, self-sticking KLEEN-STIK—and watch sales wing *your* way. You'll see why KLEEN-STIK P.O.P. Labels will sell your product better! So neat . . . so convenient . . . they cost *less* to apply, yet attract *more* attention to sell *more* goods.

 <p>FAST! KLEEN-STIK Labels go on fast and easy. No messy glue, water, or heat — just peel off backing and press in place.</p>		 <p>COLORFUL! Print by any conventional method . . . in any number of colors. For extra eye impact, there are Fluorescent and Foil KLEEN-STIK-stocks.</p>
 <p>LONG-LASTING! KLEEN-STIK won't curl or "pop off" — sticks tight, stays put until purposely removed.</p>		 <p>RESISTS MOISTURE! KLEEN-STIK is designed to stick in most any climatic conditions encountered, regardless of temperature or humidity.</p>

WE DO NO PRINTING—but versatile KLEEN-STIK Labels are available from your regular Label Printer in roll-dispensed or individual split-back types.

 <p>PRODUCT AND PACKAGE LABELS</p>	 <p>NAMEPLATE LABELS</p>	 <p>INSTRUCTION LABELS</p>	 <p>CAUTION LABELS</p>	 <p>PRICE MARKER LABELS</p>
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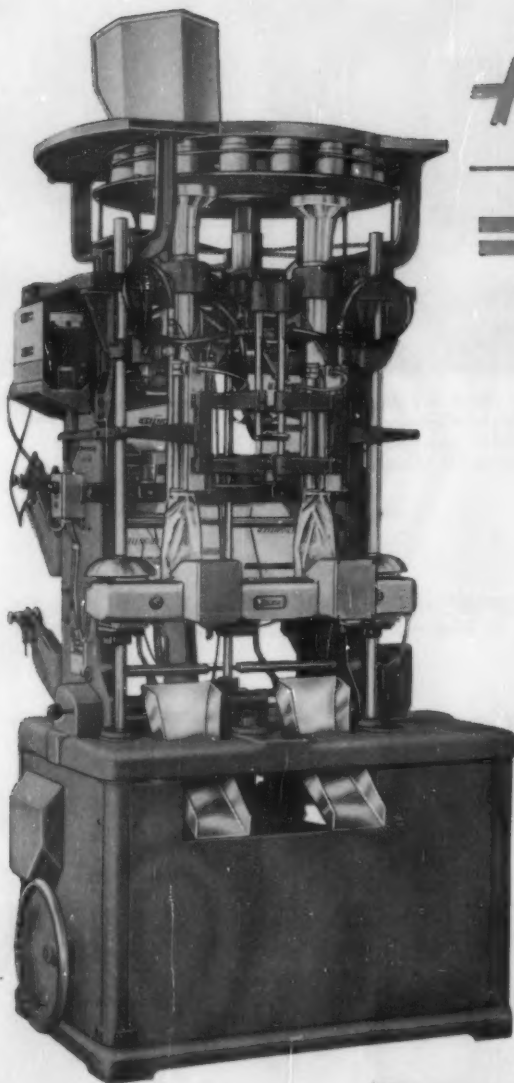
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7300 WEST WILSON AVENUE • CHICAGO 31, ILLINOIS
Pioneers in Pressure-Sensitives for Advertising and Labeling

To receive outstanding samples of successful KLEEN-STIK Labels, write on your letterhead today!

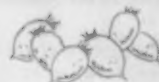
polyethylene

+ STOKESWRAP

= maximum protection
in flexible packaging for...



fruits and vegetables



hardware

chemical powders



frozen foods

candy



detergents

and many other products

Positive Seal—No Film Waste

Impulse sealing provides for the cut-off right at the seal, eliminating the tabs of conventional sealing resulting in substantial film savings.



To assure flexible packaging with maximum protection of the contents, STOKESWRAP forms clear or printed polyethylene film into a pillow type package having exceptionally high strength and resistance to rupture. This development makes possible the packaging of products heretofore too heavy to be satisfactorily handled by other materials.

A new impulse principle for sealing the polyethylene web results in strong, positive seals and eliminates film waste as well. Electric eye registration of printed film, sealing and cutoff are all achieved in one simultaneous automatic operation at high speed. The web is held in constant tension, with no reversing, for smooth, trouble-free operation.

A wide selection of feeds...pocket, auger, tablet counting, liquid, net-weight scale and special mechanisms... make STOKESWRAP well suited for low-cost high-quality polyethylene packaging of a great variety of products.



For complete information, write to:

FMC PACKAGING MACHINERY DIVISION

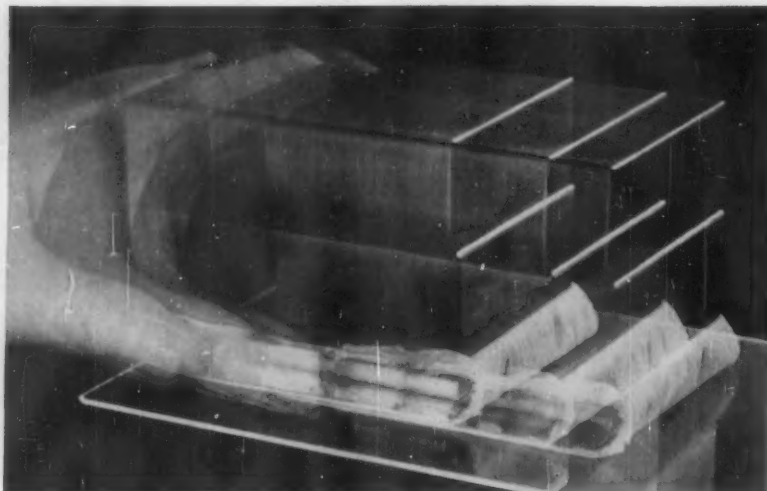
Stokes and Smith Company

4904-G SUMMERDALE AVE.
PHILADELPHIA 24, PA.



MATERIAL "X"

A 3" by 8" sample of cushioning material "X" is wrapped around the scratch block. Note the dial reading of the micro-threaded needle.



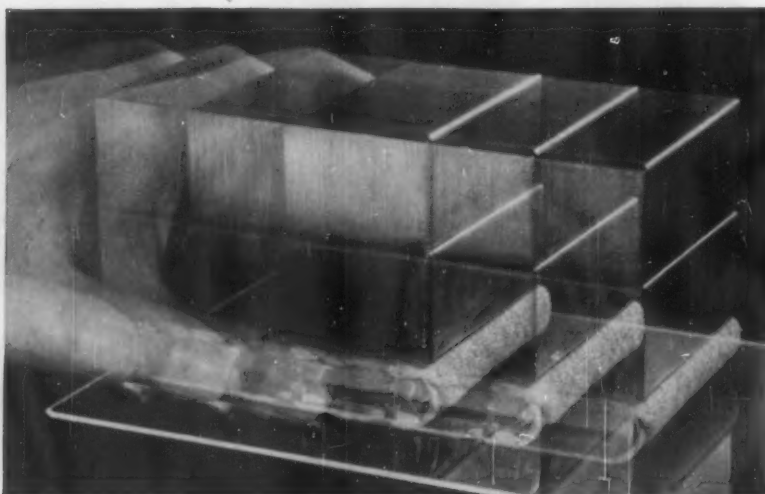
The test block has been placed on a sheet of clear plexiglass. Metal weights have been applied to the top of the test block to simulate load. The test block is now gently pushed across the plexiglass sheet.

"SCRATCH TEST" SHOWS GIVES YOUR PRODUCT

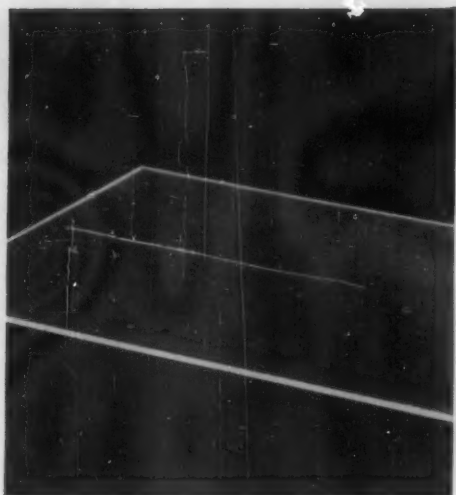


KIMPAK

A 3" by 8" sample of Kimpak of equal thickness to Material "X" is wrapped around the scratch test block. The needle setting remains as above.



The same weights are applied to the top of the test block as in the above test and forward motion is applied. Note in either test there is no downward pressure other than the given weights.



The weights and test block are removed. The plexiglass sheet clearly shows damage to the surface. The scratch needle has broken through the surface-protecting material.



The "scratch test" shows the effect of a protruding point breaking through cushioning material. An adjustable needle protrudes from the underside of a plexiglass test block. The block is wrapped in cushioning material and weights are applied to simulate load. When moved across the surface of a plexiglass sheet, a scratch appears on the sheet if the cushioning material does not provide sufficient protection.

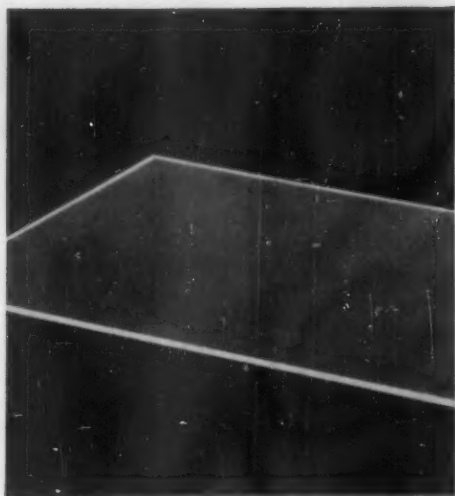
NAILS, rough spots in wood, corrugated fiberboard or other coarse packaging materials can break through inadequate surface protecting material and result in concentration of load on a small point or area with damaging results.

The surface-protecting cushion you select must have the necessary thickness under load to distribute the load evenly over the entire surface area and prevent such a break-through.

Call Kimberly-Clark today for a Kimpak packaging engineer to see you. He'll help you with your packaging problems and demonstrate the "scratch test" with Kimpak and any other cushioning material you select.

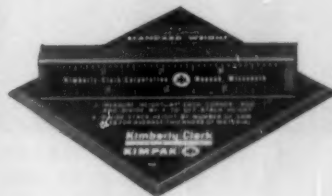
WHY KIMPAK* INTERIOR PACKAGING

BETTER SURFACE PROTECTION



After weights and test block are removed, the plexiglass sheet is shown to be undamaged. Lack of scratch marks reveal superior surface protection with Kimpak.

FREE—Check the effective thickness of your cushioning material

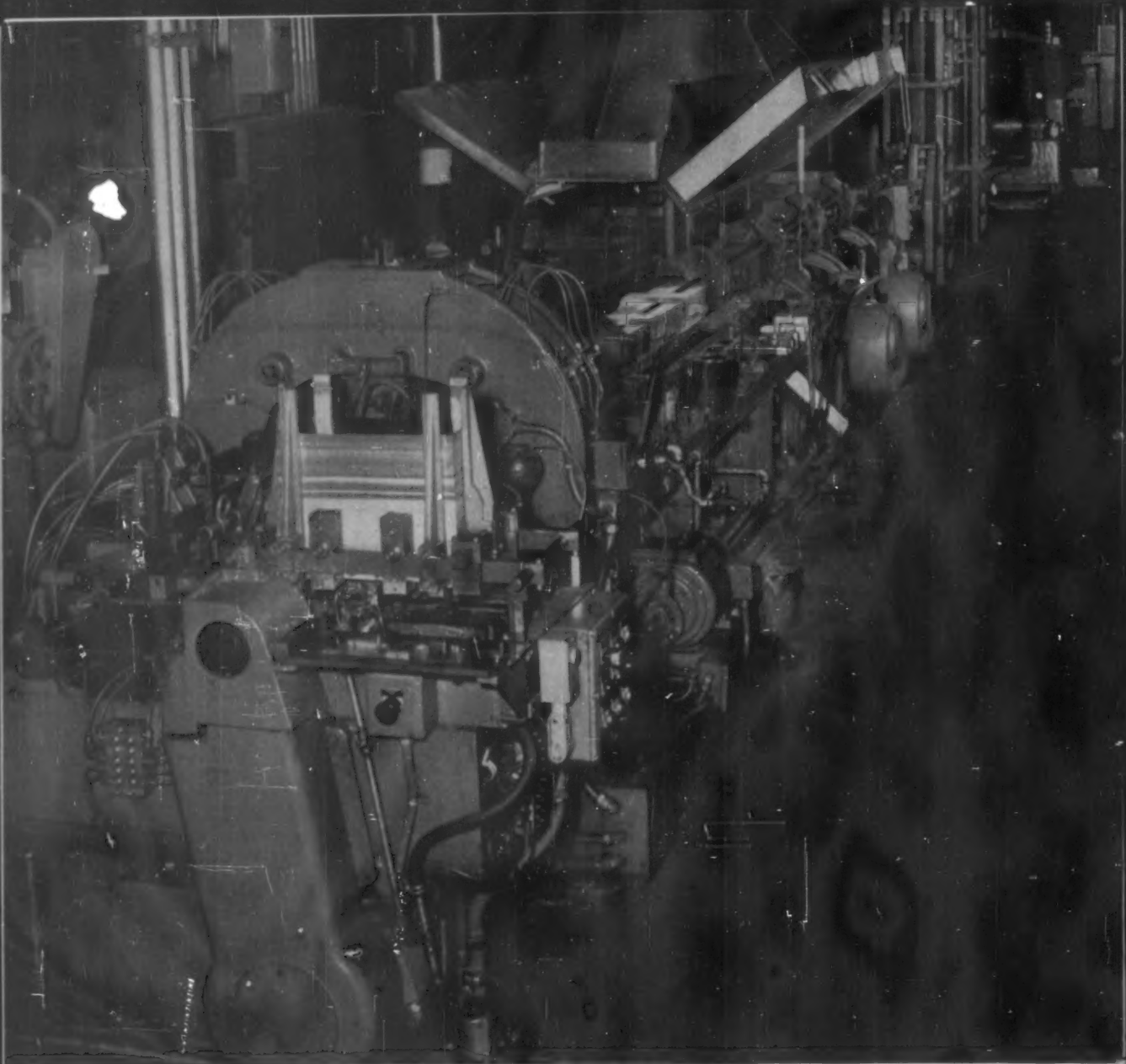


The *effective thickness* of a cushioning material is its thickness under a standard load. Here's how you can check the effective thickness of the cushioning material you are now using. It's easy with this precision-made, aluminum standard weight which applies the 3½ pound per square foot load required by Federal Specification. This weight is *free* to all packaging engineers and cushioning buyers. Just ask the Kimberly-Clark representative who calls on you or write Kimberly-Clark, Dept. M-87, Neenah, Wisconsin.

Kimberly Clark
INTERIOR PACKAGING
KIMPAK *

*T. M. REG. U. S. PAT. OFF.

Kimberly-Clark Corporation • Neenah, Wisconsin



Pictured above is one of three Hamilton can machine lines installed at Sherwin-Williams' San Leandro, Calif., can making plant. This line includes a new Hamilton 501 bodymaker, flanger, duplex slitter and tester.

The Hamilton 501 bodymaker is extremely versatile— capable of handling cans up to 404 x 510

The new Hamilton 501 bodymaker is one of the most versatile high speed machines in its field—adjustments can be made readily to produce cans from 202 x 202 to 404 x 510 sizes. And high speeds can be maintained even in making the larger can sizes.

The Sherwin-Williams Co. is one of the can makers to recently install Hamilton 501 body-

makers and related Hamilton can machinery. Two Hamilton 501 lines are helping Sherwin-Williams manufacture a portion of its own can requirements, as well as supplying the package needs of other firms in the oil and paint industry.

Write today for complete details, including specifications, of the new Hamilton 501 bodymaker.

Hamilton Division Hamilton, Ohio

BALDWIN · LIMA · HAMILTON

Diesel engines • Mechanical and hydraulic presses • Can making machinery • Machine tools





CLEVELAND CONTAINER DUST GUNS

This metal-end telescope container is a complete self-contained unit . . . needing only a perforation in the top to be ready for use.

SALES APPEAL and UTILITY are combined in this practical dispenser of dusting or spraying insecticides for gardens, flowers, plants, fruit trees and shrubs.

Our WEED KILLER package, designed for use from a standing position, is ideal for dispensing chemicals for weed and crabgrass control.

Containers for
refills available
in all sizes.



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ther information.

Why pay more? For quality products
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• ALL-FIBRE CANS • COMBINATION METAL
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TUBES AND CORES FOR ALL PURPOSES

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Containers & Packaging

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Premiums



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• Whatever your custom needs in plastics manufacturing, call on Tupper's wide experience and modern manufacturing facilities. Our large, up-to-date plants, equipped with the best production machinery, are available for materials, injection molding, extruding, vacuum forming, blow molding—and other advanced processes.

The Tupper Engineering Department has developed the greatest number of patents in the industry for polyethylene seals, closures, and dispensers—and other items in other plastics. This know-how can be tapped by you to place your plastic products in a position of leadership.

Tupper seals and other Tupper products are protected against unauthorized manufacture by about 150 U. S. and foreign patents and patents applied for, plus numerous trademarks and copyrights.

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Webster says a "cynosure" is something that strongly attracts attention by its brilliance — which is about as neat a description of Milprint lithographed cartons as you're likely to find in a shelf of dictionaries. That's one reason why so many of the nation's leading packers depend on colorful, precision-printed Milprint cartons to stand out — and sell out — to today's supermarket shoppers. Life-like, appealing illustrations, attractive design and experienced craftsmanship create packaging that exerts an irresistible "buy me now" appeal. To put that combination to work for you, remember to "Call your Milprint man first!"

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Laminations • Folding Cartons • Bags
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*Reg. U. S. Pat. Off.

This insert lithographed by Milprint, Inc.

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MELROSE 5-6311...
...your direct
line to fast foil
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OUR "plant-to-you" service plus our production flexibility enable us to supply you quickly with quality foil in widths for all your packaging needs, as they arise—keeping your inventory to a minimum.

Let us demonstrate this fast, flexible service to you.

Write for booklet, "Meet Cochran Foil", 1430 South 13th St.,
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Cochran **FOIL COMPANY**
Incorporated

Plain, Laminated, Colored and Coated Foil for Packaging
and Industrial Applications • Colled Aluminum Sheet

FACILITIES AS FLEXIBLE AS FOIL ITSELF

ARISTOCRAT OF ALL PACKAGES!

KIMBLE OPTICLEAR VIALS . . .

The tooled neck of the vial and special stopper provide positive protection against moisture-vapor transmission.



KIMBLE OPTICLEAR SHELL VIALS . . .

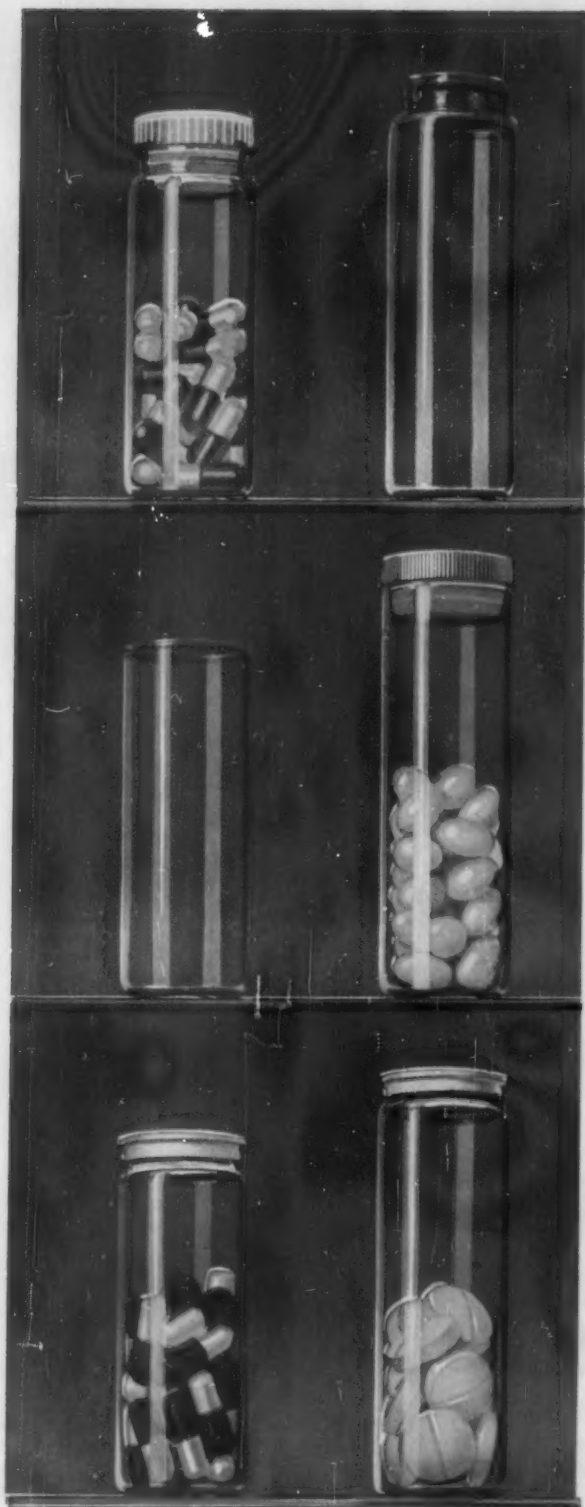
Kimble Opticlear Shell Vials have a hollow polyethylene stopper which provides more room for contents. Designed and priced for mass packaging!



KIMBLE OPTICLEAR SNAP-CAP VIALS . . .

With a flick of the thumb, the new Kimble Snap-Cap is on or off! These resilient, custom-designed plastic caps can be applied on high-speed equipment to help you cut packaging costs.





Shopping guide to Kimble's world-famous family of **OPTICLEAR VIALS**

Now—there's a trim, sparkling-clear Opticlear Vial designed to help you sell and protect *your* products . . . at a price you can afford!

When you send your dry products to market in Kimble Opticlear Vials, you give them two important advantages: unique protection and the sales advantage of sparkling eye appeal.

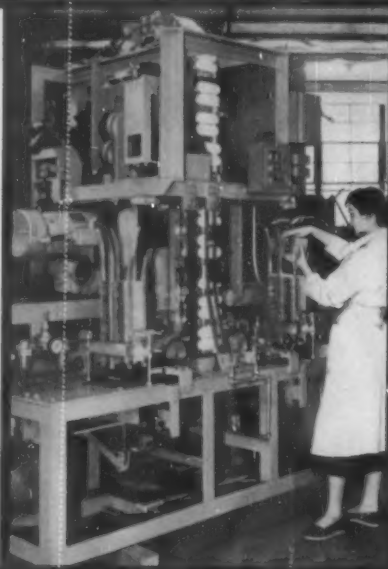
Opticlear Vials give your customers greater convenience, too. The specially designed, resilient plastic stoppers are easy to remove and replace, always reseal tightly . . . keep contents fresh and clean . . . free from dust, dirt, moisture.

Decide now to give your products the sales-building benefits of lustrous Kimble Opticlear Vials. All three families are available in 1, 2, 3, 4, 5, 7, 10 and 12-dram sizes. For complete details, samples, and prices, write Kimble Glass Company, subsidiary of Owens-Illinois, Toledo 1, Ohio.

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AN **®** PRODUCT

OWENS-ILLINOIS
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New
high-speed
Can Band
loader



packs
1200 cans
a
minute

CONTAINER CORPORATION OF AMERICA'S high-speed multipacking machine is the fastest on the market—packs up to 1200 cans a minute.

Now canners can produce their frozen juice packs faster than ever, thanks to a quick-loading multipacking machine. Designed for Container Corporation of America, the High-Speed Can Band Loader—

- Packs up to 1200 cans a minute, a *new speed record for juice concentrate packaging*. (200 no-handle six-packs or 400 split three-packs in six-oz. can size.)
- Loads *more than* the output of *two* canning lines. • Requires only one operator.
- Eliminates gluing or locking of cartons in your plant.

THE MACHINE, THE MULTIPACK AND HOW THEY BEST CAN SERVE YOU

Container Corporation of America offers you not only the latest machines and the most advanced multiple package—the versatile CAN BAND®—but merchandising counsel on how multiple packaging can best serve *your* product. Our information is based on sound market studies and continual testing of a wide range of multipacked products in retail outlets throughout the country.

* For more information on the new High-Speed Can Band Loader and expert multiple packaging counsel, fill in the coupon and send it to us today!

CONTAINER CORPORATION OF AMERICA

38 South Dearborn Street, Chicago 3, Illinois

I would like to know more about your new High-Speed Can Band Loader.

Name _____ Position _____

Firm _____ Product(s) _____

Address _____ City _____ State _____

Colorful Packages Stand Out!



... the right colors on your food product wrappers can be the difference between making and losing sales. Because the correct colors—in proper balance with brand identification and mouth-watering Taste Excitement serving suggestions—can give your food product a “package personality” that *stands out* and *sells* on crowded supermarket shelves.

But remember that modern package design is a science. Put *your* food products in colorful wrappers that sell against *all* competition. Use Western-Waxide’s specialized knowledge and experience to solve your packaging problems or consult a qualified independent package design expert.

*Increased Sales
...by Design!*



CROWN ZELLERBACH CORPORATION

WESTERN-WAXIDE SPECIALTY PACKAGING DIVISION

PLANTS AND SALES OFFICES: SAN LEANDRO AND LOS ANGELES, CALIFORNIA • NORTH PORTLAND, OREGON • ST. LOUIS AND KANSAS CITY, MISSOURI
SALES SERVICE OFFICES: Akron • Atlanta • Chicago • Cincinnati • Dallas • Denver • Memphis • New York City • Omaha • Salt Lake City • Spokane • Seattle

© CZWW - 1291-C



- Higher Gloss
- Stronger Color
- More Mileage
- Freedom from Blocking
- Maximum Water Resistance

...all yours when you use one
of BBD's modern multipurpose
"700 Series" Flexographic Inks

Pick the one that suits you best

	For Safety "S-700" SAFE-T-BRITE	For Speed "M-700" MUL-T-BRITE
PRINTABLE STOCKS	1. Polyethylene (treated) 2. "Mylar" and other polyester films 3. Saran-coated cellophane 4. Aluminum Foil 5. Glassine	1. Polyethylene (treated) 2. "Mylar" and other polyester films 3. Saran-coated cellophane 4. Aluminum Foil 5. Glassine 6. Plain cellophane 7. Moistureproof cellophane
PRINTING SPEEDS	Works beautifully on equipment operating at speeds to 225 fpm. Ideal for printing in conjunction with bag-making or other in-line operations	Performs efficiently on high-speed presses running at up to 500 fpm. Easily modified to dry properly on slow-speed equipment too
FLASH POINT	High flash point—far above that of conventional alcohol inks — (90° F. TAG open cup) affords unique safety factor. Requires no red labels, creates no fire hazard in use or storage	Comparable to that of conventional alcohol flexographic inks and should be treated accordingly
PLATES and ROLLERS	Natural or synthetic rubber (Buna "N")	Synthetic rubber (Buna "N")

Which one for you—SAFE-T-BRITE or MUL-T-BRITE? That depends on what kinds of material you print, and whether you print roll-to-roll or in-line with a fabricating or converting operation. But, whichever you choose, you'll get an ink with never-before-available features... an ink that simultaneously improves your printing quality and increases your production efficiency... gives greater mileage than other flexographic inks.

BBD's "700 Series" Inks give you the kind of gloss, color strength, non-block quality and water-resistance that can't be obtained with conventional flexographic inks because SAFE-T BRITE and MUL-T-BRITE are formulated

on an entirely new and different non-alcoholic solvent system. They represent an advanced concept of inkmaking that crashes through old barriers... opens new horizons of achievement for film, foil and paper converters.

SAFE-T-BRITE and MUL-T-BRITE Inks have won wide acceptance here and abroad, are now being used successfully on every type of flexographic press. Try one or both of these sensational new "700 Series" Inks and see what a difference they make. A trial run can be arranged at your convenience by contacting the BBD plant nearest you. Why not do it now?



Fact-filled "700 Series" Technical Data Sheet and printed samples available on request to Bensing Bros. and Deeney, 3301 Hunting Park Avenue, Philadelphia 29, Pa.



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NEW! REYNOLON

TRADE MARK



- New Reynolon polyvinyl alcohol film is completely soluble in water . . . ideal for packaging solids, liquids, powders

- Fully transparent

- Heat sealable

- Strong

- Gas impermeable

Investigate this intriguing new packaging material. Consider its exciting potential for packaging detergents, fertilizer, toilet cleansers, household or industrial dyes, whiting agents, bleaches—or for other applications your own ingenuity may devise. For details, simply call your nearest Reynolds Metals Company office or write, wire or call direct today.

NOTE: Reynolon Water Soluble Films are individually tailored to the exacting requirements of each specific application. We will welcome the opportunity of working on applications of major interest to you.



water-soluble FILM

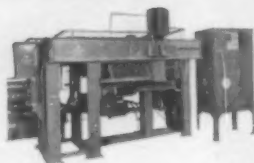


**PLASTICS DIVISION,
REYNOLDS METALS COMPANY**
GROTTOS, VIRGINIA

YOUR ANSWER TO A PRODUCTION OR CONTROL PROBLEM

MAY BE A *Custom-Engineered* **TOLEDO**

**Product
Testing
and
Sorting**



This custom-engineered Toledo automatically tests and classifies coil springs for automobiles at the rate of 900 per hour. It is one of many types of Toledos used in classifying, testing and balancing.

**Automatic
Bulk
Weighing**



Accurate, printed weight records of bulk materials such as flour going into truck or carload shipments are provided by this Toledo. Automatically weighs materials and transmits weight data to remotely located adding machine for totalizing and recording.

**Automatic
Liquid
Filling**



This Toledo provides fast sub-surface filling of drums, eliminates frothing—cuts off flow of liquid precisely and automatically. Speeds liquid handling operation. Indicates tare, gross and net weight.

**Electronic Weighing
with Remote
Dial Location**



Toledos with electronic load cells eliminate mechanical connections between platform and scale head; bring new flexibility to testing and weighing operations. Dial may be located wherever desired and weight data fed into a variety of recorders and office machines for processing. Digital indication, if desired.

**Centralized
Control of
Weighing Systems**



Complete, centralized, push-button control of batching or filling operations is provided by Toledo Control Consoles such as this. Listing and adding unit receives weight data directly from remote scales.

What's your problem?

Whether the answer lies in a custom-engineered Toledo unit, a special adaptation or in one of the wide selection of standard Toledos, your inquiry will receive prompt attention. Write today. Toledo Scale Company, Toledo 13, Ohio.

TOLEDO

HEADQUARTERS FOR SCALES



**FLOOR AND
TRUCK
SCALES**



**BENCH AND
PORTABLE
SCALES**



**OVER-
UNDER
SCALES**



**WEIGHT
PRINTING**

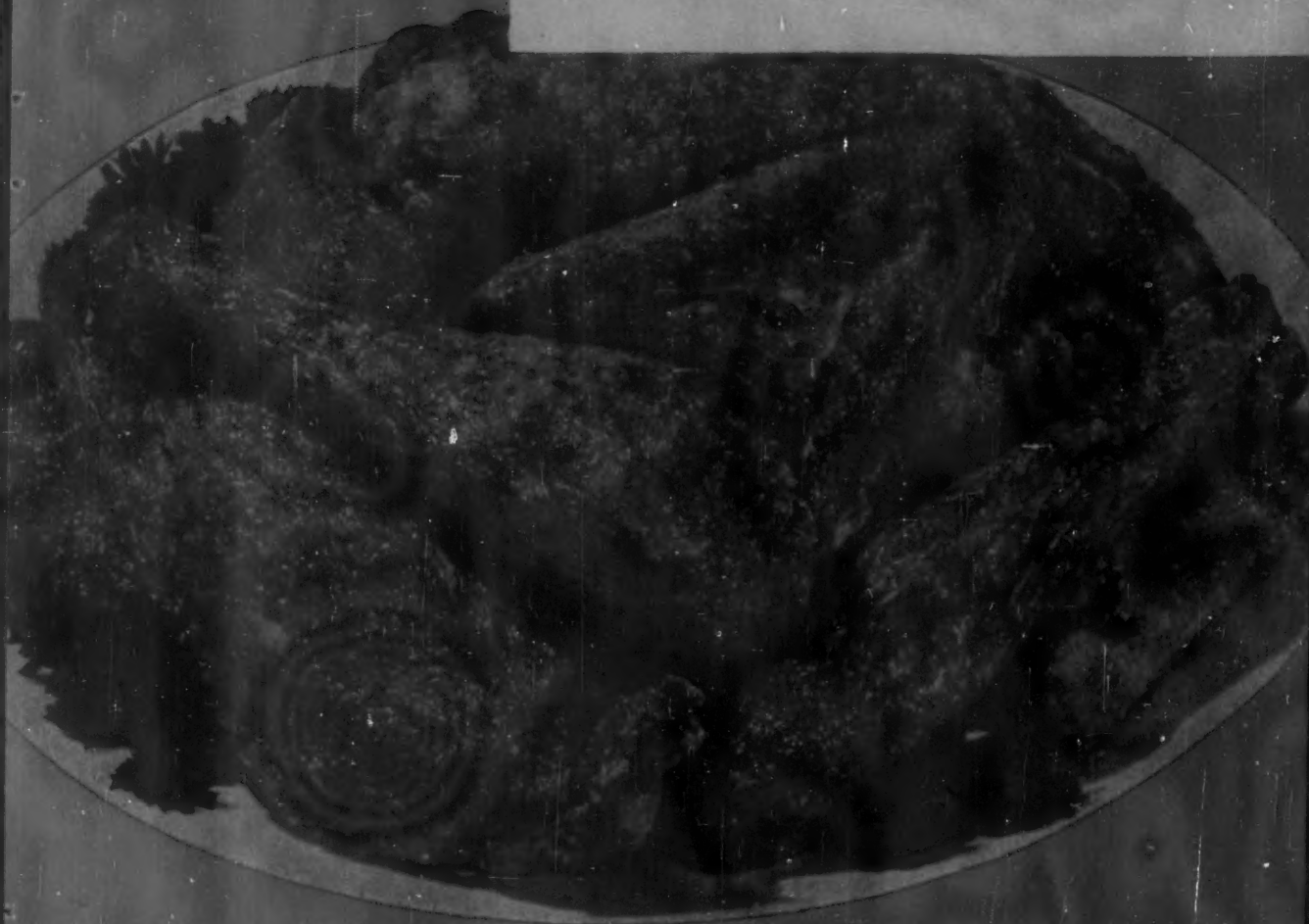


**OVERHEAD
TRACK
SCALES**



**COUNTING
SCALES**

FOOD PICTURES THAT **SELL**
ON WRAPPERS THAT **PROTECT**



FROM **KVP**

Would you like to see
current production runs?
Liberal samples, without
obligation, are yours for
the asking. Write today.

Your food packages can have this same powerful appeal of ready-to-eat realism with KVP's new overwrap papers and new printing methods. Now you can get the sure product protection for which KVP overwraps are famous, plus everything you desire in letterpress or gravure food illustrations.

This is KVP letterpress printing in six colors. KVP gravure printing, up to eight colors, is equally beautiful.

THE **KVP** COMPANY • KALAMAZOO, MICHIGAN

**ON WRAPPERS THAT PROTECT
FOOD PICTURES THAT SELL**



FROM KVP

Your food packages can have the same powerful appeal of ready-to-eat
products with KVP's new overwrap papers and new printing methods. Now you
can get the sure product protection for which KVP overwraps are famous, and
everything you desire in letterpress or gravure food illustrations.
This is KVP letterpress printing in six colors. KVP gravure printing, up to eight
colors, is equally beautiful.

Would you like to see
current production runs?
Liberal samples without
obligation are yours for
the asking. Write today.

*glass
containers
move
more
chemical
specialties*



Use Anchorglass® containers
sealed with Anchor® caps



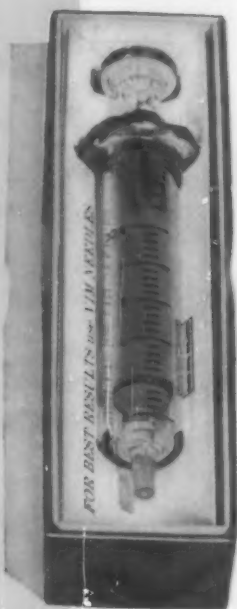
... because they protect your product strength

HOUSEWIVES recognize the glass container as the most sanitary package . . . one that fully protects the strength, purity, potency and other qualities of the contents until entirely dispensed. Because the glass container is chemically inert it cannot change the product packaged in any way. It won't rust or corrode—inside or out . . . volatile contents do not evaporate and dry products will not absorb moisture. Move more of your chemical specialties in glass . . . in Anchorglass sealed with dependable Anchor metal or non-corrosive molded closures.

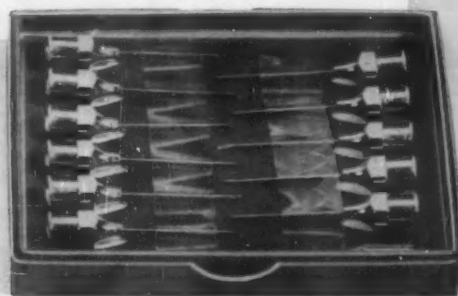
ANCHOR
HOCKING
GLASS CORPORATION
Lancaster, Ohio



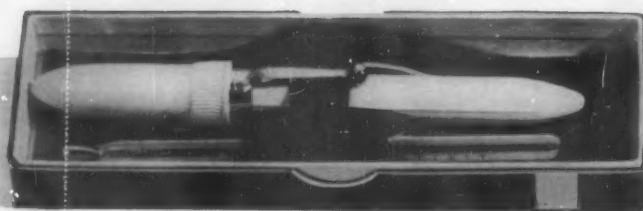
Rowell Boxes



Syringe Box



Needle Box



Thermometer Box

for distinction
and utility



E. N. Rowell Co. Inc.
BATAVIA, NEW YORK

Canisters, round and square set-up boxes for every purpose

Which Shirt Would You Buy?



Wrapped in
Conventional
Polyethylene

Wrapped in
New Spencer
2400 SERIES
Polyethylene

See why customers prefer soft goods wrapped in glass-clear films made from Spencer's new exclusive 2400 series polyethylene.

Are You Using This New Glass-Clear Polyethylene?

New Spencer 2400 film grade resins also are stiffer and easier to handle, yet cost nothing extra:

Extruders are now switching to a new, glass-clear film produced from the exclusive "Poly-Eth" 2400 series resins. And they report that by actual comparison, this film is twice as clear as conventional polyethylene film, and it has a higher gloss.

This means greater package beauty than has ever before been possible for soft goods wrapped in polyethylene film. It means no color dulling due to semi-opaque film. Every color, every line is as sharp and clear as though you were looking at it through a window.

The film is stiffer, too! Test it yourself—twist it, crumple it in your fingers. You'll find that film made from a "Poly-Eth" 2400 series resin is the stiffest standard film you can buy today!

Also, it's easier to feed this film into bag machines. And, because of its extra stiffness, it's easier to stack the finished bags. Excellent

runs have been processed at 0.4 mil thickness with both blown and flat film.

You get faster filling when you use this film, because it opens so much more easily. Test it with your fingers. Discover for yourself how free it is from tack and clamminess. And because it is less permeable, it is extra suitable for laminating.

Tailored to your needs, this new "Poly-Eth" 2400 series resin comes in three different compounds: 2405 has no slip, 2425 has medium slip, and 2455 has high slip.

This is the answer to a packager's dreams: the durability of regular polyethylene combined with extra stiffness, plus glass-like clarity. Yet a "Poly-Eth" 2400 series resin costs no more than regular polyethylene! If you're interested in film for soft goods, textiles, candy, or bakery goods, find out more about this newest forward development in packaging.

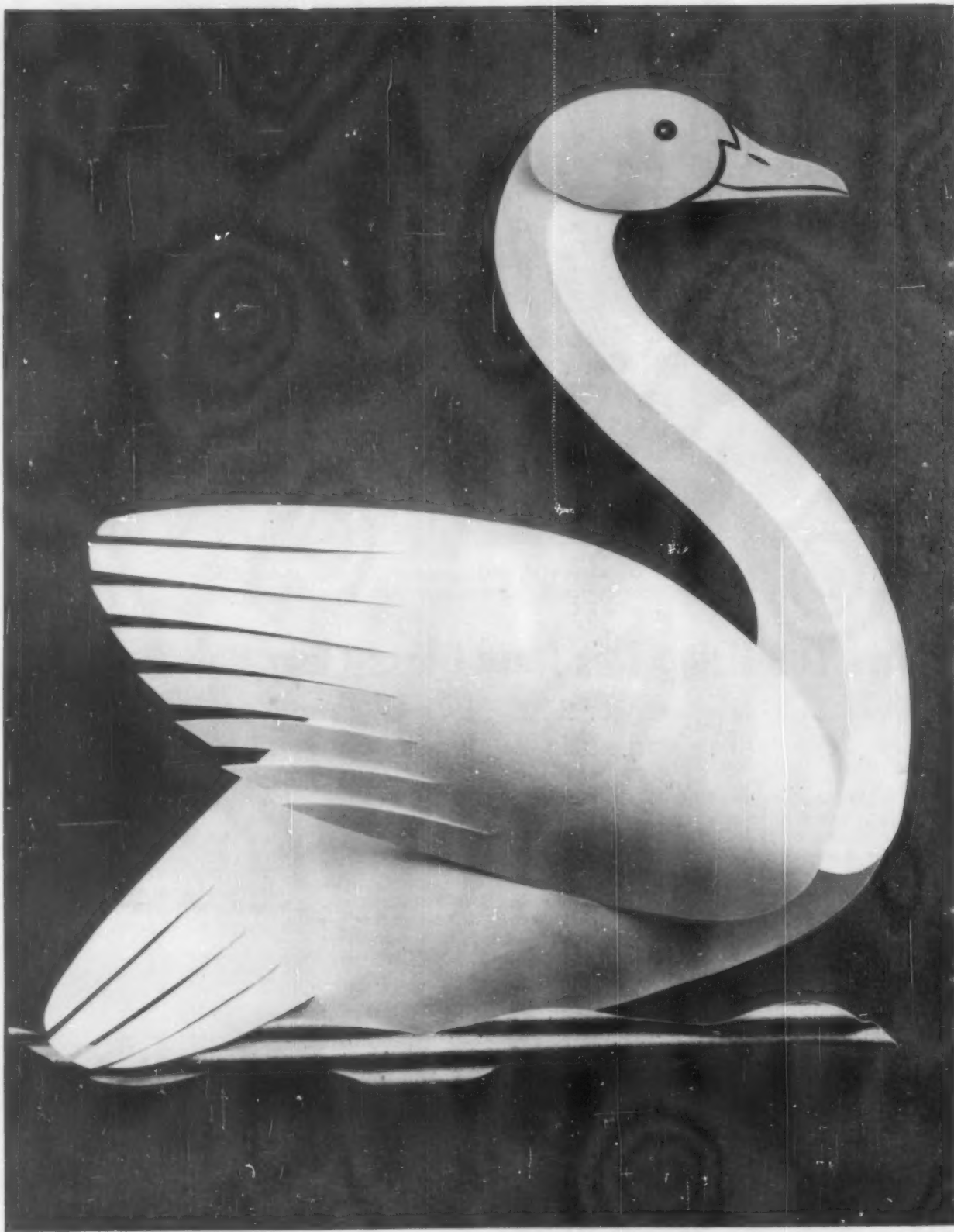
For boilable film use Spencer's new "Poly-Eth Hi-D." Film made of this exclusive resin will withstand heat up to 240° F. And, unlike other boilable plastics, "Hi-D" film can be heat sealed. Ideal for packaging food as well as acids, volatile chemicals or metal parts. Write for information.

Poly-Eth

by



SPENCER CHEMICAL COMPANY
Dwight Bldg., Kansas City 5, Mo.



WEST VIRGINIA PULP AND PAPER

bright elegance on display

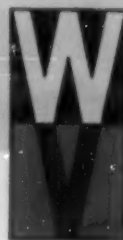


KRAFTSMAN WHITELINER

KRAFTSMAN WHITELINER is a new *test* liner specially developed by Westvaco for use in containers and displays. Its smooth, bright blue-white surface provides perfect reproduction of the finest detail and superior contrast even with lighter subdued colors. High scuff resistance and unusual strength make **KRAFTSMAN WHITELINER** ideal for eye-catching displays and corrugated containers.

BETTER BOARD for BETTER BOXES from WESTVACO

The name **KRAFTSMAN** covers a *complete line* of containerboard for every conversion use. All members of the **KRAFTSMAN** family offer the superior quality and controlled uniformity usually associated with Westvaco products. In addition to **KRAFTSMAN WHITELINER**, this line includes . . . **KRAFTSMAN LINER** top-quality kraft linerboard. **KRAFTSMAN SUPERLINER** smoother, brighter kraft linerboard. **KRAFTSMAN DURA-CORR** high-quality corrugating medium. **KRAFTSMAN WEATHER-TITE DURA-CORR** extra-strong corrugating medium for use in cold storage and other high-humidity containers. For more information, call your **KRAFTSMAN** Representative today.



C O M P A N Y 230 Park Avenue, New York 17, N. Y.

Choose a Du Pont with properties tailored for your



Soft goods of all kinds get an added sales stimulus when packaged in durable, transparent film of a Du Pont ALATHON. Because of its remarkable strength, ALATHON resists the wear and tear of customer handling. Retailers find that returns are reduced and take-with sales increased. ALATHON 10 is designed to have the very good transparency necessary for this application. (Film of ALATHON extruded by Micron Plastics Corp., Brooklyn, N. Y.; converted by Klearstone Transparent Products Co., Inc., Westbury, N. Y., for Catalina, Inc., Los Angeles, California.)



Household and hardware items are kept in factory-perfect condition when packaged in strong, transparent film of a Du Pont ALATHON. Since ALATHON does not become brittle or deteriorate, the good appearance of products is assured and shelf life is extended. ALATHON 14 is designed to have the outstanding toughness desired for variety-store packaging items. (Film of ALATHON extruded by Andmar Plastics Company, Inc., Clifton, N. J.; converted by Colonial Envelope Co., Inc., Brooklyn, N. Y., for Super Wiper Manufacturing Company, Brooklyn, New York.)



Lightweight, unbreakable jars made of a Du Pont ALATHON are ideal for packaging a wide variety of products. Because of its outstanding impermeability, ALATHON keeps products, such as cosmetics, intact . . . protects essences and aromas. The good resistance to environmental cracking and good stiffness of ALATHON 22 particularly suits this resin for containers of this type. (Jars of ALATHON are molded by the Inco Container Corp., Kansas City, Missouri.)



Squeeze bottles made of a Du Pont ALATHON are economically molded in attractive colorful designs and feature extra strength, flexibility and impermeability. Squeeze bottles of ALATHON have good rigidity . . . snap back quickly between squeezes. The outstanding property of ALATHON 20—resistance to environmental stress cracking—is designed for this type of application. (Squeeze bottles of an ALATHON are molded by Continental Can Company, Chicago, Ill., for Table Rock Laboratories, Inc., Greenville, S. C.)

ALATHON® polyethylene resin specific packaging application



Produce packaged in transparent film of a Du Pont ALATHON is kept fresh and appetizing even during warm summer months. Because film of an ALATHON does not become brittle or deteriorate even at extremely low temperatures, it is also suited for packaging frozen-food products. ALATHON 22 is designed to have the toughness to withstand filling and rough handling, yet still have good transparency. (Film of ALATHON extruded and converted by Texas Plastics, Elso, Texas, for F. H. Vahling, Inc., New York, N. Y.)



3/4-mil
Alathon
over
32-lb.
pouch
stock

Coatings and laminates of a Du Pont ALATHON provide an excellent moisture-vapor barrier . . . keep powders from caking or lumping. Foodstuffs protected with coatings of ALATHON stay fresh for long periods. ALATHON provides quick and efficient heat sealability when added to other packaging materials. ALATHON 16 is tailored to have optimum properties for coating applications. (Packaging of ALATHON by Shellmar-Betner Flexible Packaging Division, Continental Can Co., Mount Vernon, Ohio; packed by Dumont Enterprises Inc., Englewood, New Jersey, for Foods Division, Beech-Nut Life Savers, Inc., Consohoharie, New York.)

There are ALATHON polyethylene resins designed to meet nearly every individual packaging need. And every day more products, from hardware to soft goods, are being better protected . . . more attractively packaged in one of these outstanding resins.

ALATHON 16 has been specially developed for coating applications. This resin combines heat sealability with very good impermeability. Powdered products do not become lumpy or cake when a coating of ALATHON is used as a moisture-vapor barrier in the package.

Squeeze bottles made of ALATHON 20 or 22 are extra-strong and are particularly outstanding in resistance to environmental cracking. When high gloss, impermeability and stiffness are important considerations, the properties of ALATHON 37 or 17 are uniquely appropriate.

The properties of ALATHON 14 provide outstanding toughness and tear resistance for film, while ALATHON 34 yields film of singular transparency. ALATHON 10 is designed to produce film with very good transparency plus the advantage of the toughness of polyethylene.

All formulations of ALATHON are tasteless, odorless and non-toxic. ALATHON never becomes brittle or deteriorates, and retains its flexibility at temperatures as low as -100°F. Moisture, grease and oil do not affect ALATHON. And all formulations are easily and attractively printed.

But why not find out for yourself how an ALATHON polyethylene resin can make a better package for your product? Property and application data are available to you without cost or obligation. Clip and mail the coupon below.



BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

E. I. du Pont de Nemours & Co. (Inc.), Polychemicals Dept.
Room 308, Du Pont Building, Wilmington 98, Delaware
Send additional property and application data on
Du Pont ALATHON polyethylene resin.

Name _____
Company _____ Position _____
Street _____
City _____ State _____
Type of Business _____

In Canada: The Du Pont Company of Canada (1956) Limited, P. O. Box 100, Montreal, Quebec.

PACKAGING TRENDS Film Molding Products Coatings

from
paper roll
to finished
product
in...



operation!

on a NEW ERA flat-bed letterpress

ALL TYPES OF LABELS—with any stock; gummed, heat-seal silk, cotton, etc.

PRESSURE SENSITIVE LABELS—die-cut to backing sheet and stripped of waste.

ALL TYPES OF TAGS—merchandise, shipping, manifold, etc.

BAG HEADERS—with any type of stock. Also specialties, forms, tickets.

- Prints any number of colors in a single run.
- Prints one or both sides at the same time.
- Die cuts any size and shape with steel rule or male and female dies.
- Prints any type of label or tag material including pressure sensitive, heat seal, gummed, ungummed, paper, board, silk, cotton, etc.
- Slits, perforates, numbers, punches, eyelets and patches reinforcements—as it prints.
- Delivers finished product cut-off, rewound, or zig-zag folded.
- Up to 7500 impressions per hour!

Write today on your letterhead for free New Era bulletin!



MANUFACTURING COMPANY
371 Eleventh Avenue, Paterson, N. J.



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PEAK
OF
DEPENDABILITY

for highest quality

chromium steel

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JACKSON, TENNESSEE

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Model XP: For rewound rolls from 1 1/4" to 4 1/2" finished diameter. Made in various width from 12" to 36", each with a range of 12". Capacity to 25 rolls per minute.

Model DX: For rewound rolls on cores as small as 5/8" O.D. and finished rolls up to 4 1/2". Made in various widths from 6" to 24". Capacity to 20 rolls per min.

Model XPWB: For rewound, labeled and wrapped rolls from 1 1/4" to 3" finished diameter. Made in various widths from 12" to 36", each with a range of 12". Capacity to 20 rolls per minute.

Model HY: For rewound rolls from 3 1/2" to 10" finished diameter. Web width range from 24" to 48". Designed to handle the heaviest stocks such as roofing, sheathing, kraft, etc.

START FULLY AUTOMATIC ROLL PRODUCTION

The world's leading specialist manufacturers of push-button automation for roll production can meet your particular specifications with either a basic machine or one specially adapted.

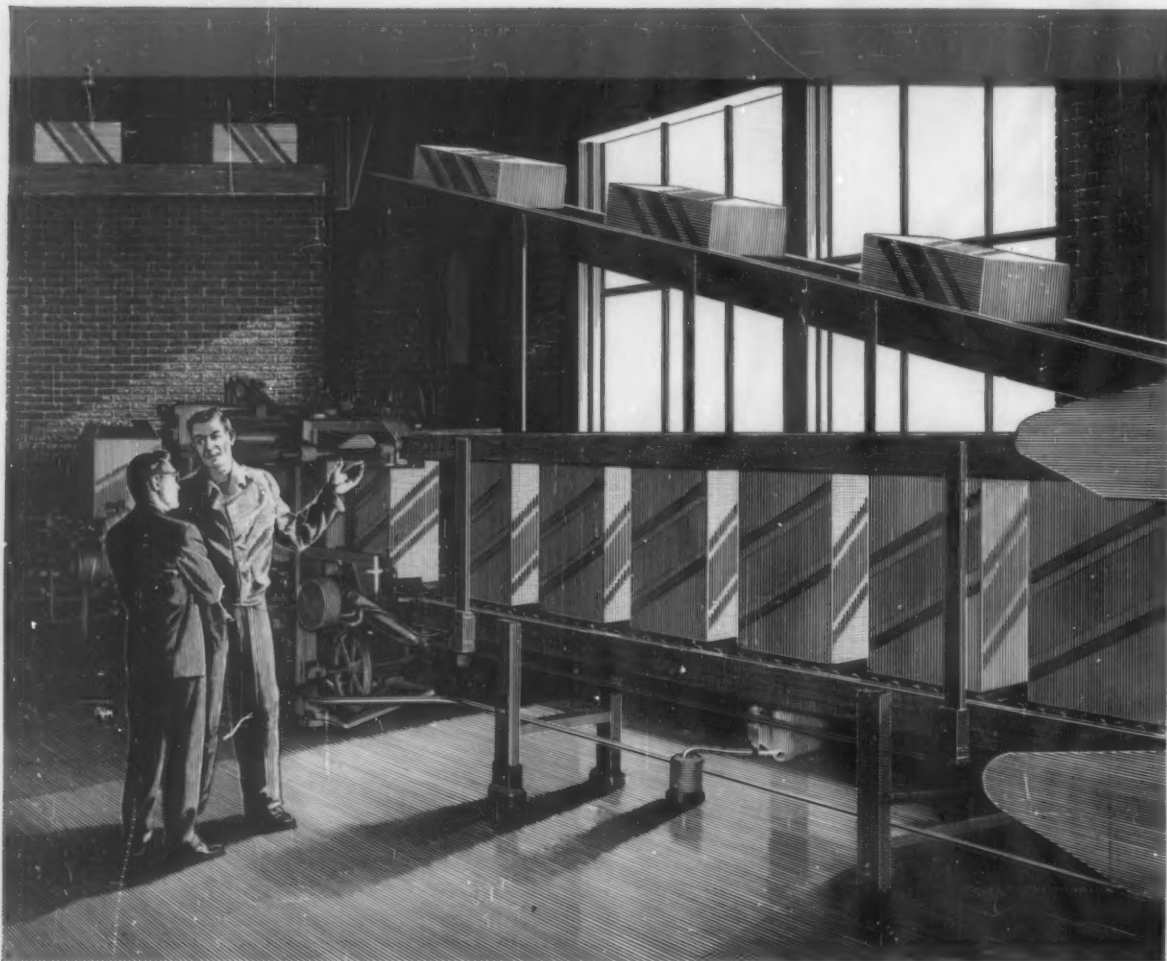
With a Schultz Automatic, control of production quantity and production quality is at the fingertip of the operator.

Every Schultz machine delivers a uniformly neat, accurately measured product whether rewound only or rewound, labeled and wrapped... even under continuous and most rigorous production schedules.

IF YOUR PRODUCT STARTS WITH A WEB AND ENDS IN A ROLL YOU CAN MAKE IT BETTER, FASTER AND CHEAPER... WITH A SCHULTZ AUTOMATIC!



VF2 • SHELF • COATED • WAXED • CHART • OTHER PAPERS • FILMS • FOILS • CELLOPHANES



PACKAGING PLANNED FOR AUTOMATION



A single "off-size" box can halt your automated production line. Stay in the clear with Gaylord boxes. Precision-made of quality materials—they're your best choice for smooth, uninterrupted package flow.

Whether your operations are fully or semi-automated, Gaylord boxes help keep you profitably on the move. Contact your nearby Gaylord packaging engineer.

CORRUGATED AND SOLID FIBRE BOXES • FOLDING CARTONS • KRAFT PAPER AND SPECIALTIES • KRAFT BAGS AND SACKS

GAYLORD CONTAINER CORPORATION • ST. LOUIS

DIVISION OF CROWN ZELLERBACH CORPORATION



Modern BAGS

made on modern POTDEVIN MACHINES

Are you reaching for new markets?
Are you able to supply *MODERN BAGS*—Bags that are tailor-made for today's packaging needs and modern marketing methods?
At POTDEVIN there's a revolution going on in bag making machines... new styles... new designs... new production speeds... new materials.
You should be part of this upheaval because you will be competing with these modern **POTDEVIN MACHINES**. Visit our plant to see some of this new equipment or let us quote on your bag machine needs.



POTDEVIN MACHINE CO.

244 North Street

Teterboro, N. J.

*Designers and manufacturers of equipment for Bag Making,
Printing, Coating, Laminating, Gluing and Labeling.*

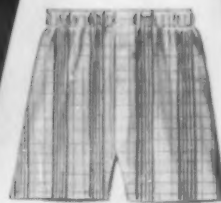
Can you spot a product NOT sold in AVISCO cellophane?



TOBACCO



BAKED GOODS



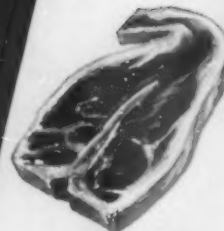
SOFT GOODS



PRODUCE



HARDWARE



MEATS



CANDY



SNACK ITEMS



PICNIC SUPPLIES

Pick a packaged item—any item. Whether it's pins or pies, shirts or spark plugs, candy or candles, AVISCO cellophane protects and sells them all.

Cellophane's versatility is boundless. When a package must be grease-proof . . . or water-resistant . . . air-tight . . . moisture-proof . . . beautifully printed, there's an AVISCO cellophane to fill the bill. Moreover, with heat-sealing cellophane, high-speed packaging machines

can wrap and seal thousands of packages an hour.

NO OTHER TRANSPARENT MATERIAL PERFORMS SO PERFECTLY ON HIGH-SPEED PACKAGING MACHINERY.

It's difficult to find any kind of packaged product that can't be wrapped better, and sold faster, in AVISCO cellophane.

In fact, *all* the products shown above are sold in AVISCO cellophane.

AVISCO
CELLOPHANE

AMERICAN VISCOSE CORPORATION • FILM DIVISION • 1617 PENNSYLVANIA BOULEVARD • PHILADELPHIA 3, PA.

You'll make **MORE PROFIT** *with*
CENTRAL FIBRE *Packaging!*



See **CENTRAL FIBRE** *for Dependable*
Protection!

Your product is assured the best possible protection in shipping and storage when it's protected by Central Fibre packaging—and product protection is also profit protection.

As a consolidation of some of the oldest paperboard mills and plants in America, Central Fibre represents a considerable wealth of skill and know-how. Central Fibre's unusual growth in recent years reflects its great vitality.

Let us show you how Central Fibre can convert this know-how and vitality into better protection for your product and better profit protection for you.

**CENTRAL FIBRE
SERVES AMERICA
FROM 21
CONVENIENT
CITIES**

PAPERBOARDS AND SPECIALTIES
CORRUGATED SHIPPING CONTAINERS
FOLDING CARTONS AND SET-UP BOXES
EGG PACKING MATERIALS
POULTRY HOUSE SUPPLIES
MAPES MOLDED PULP PRODUCTS



More Than 80 Years of Continuous Service and Progress

CENTRAL FIBRE PRODUCTS COMPANY

General Office, Quincy, Illinois

How CAMPCO ACETATE adds see-level ...buy-level... sales appeal



When customers can see . . . they buy. And when your blister packs are made of CAMPCO acetate, they're sparkling clear—yet surprisingly strong, even in thinner gauges.

For example: the fish lure you see above. What better way to display lures—yet protect the hooks? . . . And what better way than those shown below at right, to package small hardware? . . . Or, notice the sample pill pack. It carries its own professional sales message, built right in.

CAMPCO acetate makes see-level packaging and selling possible at unusually low cost. It's easy to form, won't cloud or discolor because of CAMPCO's special non-blushing formulation, and is ideal for short runs or long. Also, combining it with liners or package bottoms made of CAMPCO "Registrite" sheet makes an attractive merchandiser such as the Thimble Drome package by L. M. Cox Mfg. Co., Inc., Santa Ana, Calif. (shown directly below). This rubber modified styrene sheet comes in glossy or mat finish plus a variety of designs ranging from woodgrains to polka dots. Most gauges and finishes available immediately from stock.

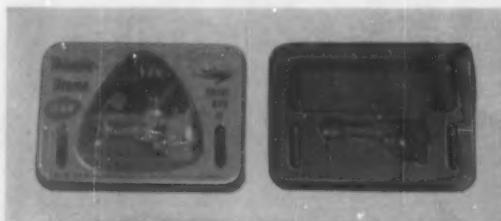
But whether it's pills or toys—acetate, butyrate, or styrene—it pays to use CAMPCO sheet and film. They'll put real see-level in your packages. For details, write:



CAMPCO sheet and film a division of

Chicago Molded Products Corp., 2708 Normandy Ave., Chicago 35, Illinois

STYRENE • ACETATE • POLYETHYLENE • RIGID POLYETHYLENE • BUTYRATE • COPOLYMER STYRENE



*These packages manufactured by Plastic Container Div. of Plastofilm Inc., Wheaton, Ill.

Pep up your package...
step up your sales...
with Dixie's *New*
Super Sheen

A **Super Sheen** packaged product stands out on any shelf. Manufacturers who use bags or overwraps for their products have reported amazing sales increases when they changed to Dixie's **SUPER SHEEN**.

Call or write today for details on how **SUPER SHEEN** can pep up your package and step up your sales.



What Is Super Sheen?

Super Sheen is Dixie's newest and finest development for the utmost protection to your product and increased sales appeal to your package. It has been perfected by Dixie's team of Packaging Specialists.

Super Sheen is a custom built bag of duplex wax construction . . . either 25/37 lb. or 35/47 lb. outside bag with 25/28 lb. liner. The inner liner is constructed of Dixie's famed **FRESHEEN**, a superior waxed glassine. The outer bag is composed of a new improved opaque waxed paper with a long fibered base pulp that eliminates brittleness.

Wherever **Super Sheen** has been market-tested users are enthusiastic. And rightly so. For this new bag has been custom-developed to give your product the highest degree of beauty and protection that is scientifically possible.



DIXIE

Wax Paper Company

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New Brochure

NOW AVAILABLE



Shows complete line
of **FLEXOGRAPHIC**
printing equipment

Whatever your printing packaging problem is . . . first see the complete line of Wolverine's Flexographic equipment.

Equipment covers such operations as printing on fine film, heavy board, paper cups, bread wraps, envelopes, box-board and cellophane.

Wolverine specializes in the manufacturing of Flexographic printing equipment to meet your individual needs.

Write, wire or phone
for your catalogue



WOLVERINE PAPER CONVERTING MACHINERY CORP.

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Cable Address: WOLPAC



Look
at
the

little
one
closely

Six of them are contained in the larger carton for a doctor's medical supplies. The flap on cover gives the doctor full information regarding ingredients and recommended dosage. Torn away, the flap removes all identification, thus complying with the law that prohibits dispensing without prescription. More and more such service features are becoming part of Gardner cartons. May we discuss such possibilities with you?



Many Great Products reach the consumer in "Cartons by Gardner" . . . Yours Can Too!

THE GARDNER BOARD AND CARTON CO.

Middletown, Ohio



Manufacturers of Folding Cartons and Boxboards

Paper Needs
the
"TOUCH OF TALENT"

The old papers of Italy, probably first introduced there by the Saracens of Spain, had remarkable texture and quality.

However, it took the touch of a Michelangelo to transform paper into this 16th century work of art, highly treasured today.



It is the touch of talent that gives a paper product its ultimate appeal... whether as a work of art to a sophisticate, or as a wrapper around a candy bar to a chocolate-hungry kid.

NASHUA
Corporation
NASHUA

NASHUA PACKAGING TALENTS AVAILABLE TO YOU... Creative Design • Paper Chemistry • Package Engineering • Coordinated Packaging • Quality Production • Procurement Versatility... Nashua Corporation, Nashua, N.H.

MODERN PACKAGING

August 1957

Featured in this issue . . .

It's a wise product that knows its market

The super-selling trend that makes food, drug, variety, hardware and department stores look so much alike does not simplify the packaging problem; it complicates it. All these outlets have their own practices, preferences and physical requirements which must be taken into consideration by the packager who looks—as he must today—for across-the-board distribution. Meeting these requirements while maintaining a strong brand image in national advertising calls for closest cooperation with sales and advertising departments.

Read "The Mix-Up in Merchandising," p. 87

What's happening to overwraps and liners?

Significant progress toward the goal of protection in a single cartonboard material is reported. Morton Frozen Foods demonstrates the use of a new carton-sealing method, using a cold-waxed carton and special adhesive, so effective that no overwrap is needed. Similarly, a dry cereal product is being cartoned so efficiently the inner liner is eliminated. Three manufacturers developed high-speed equipment to make the special thermoplastic seal.

See "Wrapless, Linerless Cartons," p. 92

The original convenience package

Born in the brain of an artist who disliked storing his paints in goatskin bags, the collapsible metal tube is still a model of combined protection and convenience for dozens of pastes and viscous products. More than a billion tubes have been used by packagers in each of the last three years, and developments in materials, structure, manufacturing and filling efficiency, decoration and self-display techniques promise continued growth. For this month's *Supplier Industry Survey*, turn to

"Collapsible Metal Tubes," p. 96

Thousands of product variations in just two packages

Result of a packaging engineer's imagination and ingenuity is Besly-Welles' mechanized system for inserting small cutting taps and carbides in blocks of foamed polystyrene which fit in "cigarette case" polyethylene telescope boxes. With this lightweight, superior package, the company has adopted a new method of on-the-line label imprinting which alone saves \$50,000 a year and has reduced sizes of corrugated shippers from 34 to five.

See "Tools in Plastics," p. 101

Can a picture say more than transparency?

For 20 years a tango-colored cellophane-wrapped window package has meant Dromedary Dates on the grocery shelf to millions of shoppers. When it became desirable recently for The Dromedary Co. to adopt new packaging constructions to improve product protection and package production efficiency, the company had to make a tough decision between a package in which the product was visible

and one which merely pictured the product on the wrapper. Striking results of a full-color rotogravure-printed, waxed overwrap point up a strong case for photographic reproduction versus actual product visibility.

See "New Dromedary," p. 108

How to put over an odd new package

In adapting the unique tetrahedron-shaped paper milk container from Sweden to the packaging—for the first time—of individual portions of ice cream, Safeway Stores was faced with a problem of consumer education. The innovation was launched, with rousing success, in Seattle, by playing up the idea that "It's fun!" It's more than fun for Safeway, because the container—automatically formed, filled and sealed on one compact machine from a single roll of polyethylene-coated paper—appears to offer substantial cost savings. A single 90-lb. roll of paper makes 10,000 ice-cream packages ready for selling at speeds up to 4,200 per hour.

Read about it in "New Shape for Ice Cream," p. 116

Fancy caps vs. efficient capping

Competition in such industries as toiletries, cosmetics and liquors is forcing packagers to ever-more-novel shapes and sizes of molded closures to lend distinction to the line. Until recently, switching from one to another of these fancy caps on the production line was a major headache. But a new high-speed capper with pneumatic chuck, adopted by Avon Products, switches styles quickly and smoothly, handles caps so gently that down time caused by broken and jammed caps is virtually eliminated.

It's told in "Approach to a Universal Capper," p. 124

More powerful than a thousand words

So thinks the Peter Hand Brewery of the full-color photographs which it wraps completely around its cans for Meister Brau beer, leaving only one small panel for brand name and copy. Beautifully six-color-lithographed photos show happy young couples in 10 different sports activities that seem to call for beer; variety of scenes makes for diversified display, and assortment is guaranteed by system of collating in six- and 12- can carry cartons. The packaging concept of festive containers reflects in a modern way the centuries-old tradition of decorated beer steins.

See "Picture Cans for Beer," p. 128

A new principle of grease resistance in paper

A fundamentally new kind of paper sizing, derived from fluorochemistry, makes paper repel grease just the way grease repels water and without changing the feel or characteristics of the paper. The treatment, applied at the paper machine, imparts a high degree of water repellency as well. A variety of packages and packaging materials made from treated paper or board have now been studied. Among the prospects: asphalt-laminate kraft bags with greatly increased resistance to asphalt "bleed" caused by heat or oil; better, more opaque waxed papers at lower cost; better grease-resistant polyethylene-coated papers with thinner coatings.

First full report in "A New Repellent Sizing," p. 137

Radioactive rays check package fill

A nucleonic package monitor, developed in England, sends a stream of beta rays through filled and sealed packages as they pass along the packaging line, distinguishing with amazing speed and accuracy any irregularity such as a fill level too high or too low; a broken tablet, missing tablet or even a jumbled arrangement, or simply a carton coming empty off the cartoning machine. It can activate a mechanism to eject the faulty package from the line. Speed of inspection may be as high as 300 packages per minute.

See "Nucleonic Fill Monitor," p. 144

The mix-up in merchandising

*Food, drug, hardware, variety
and department stores
are looking and selling
more and more alike;
but it's a mistake to assume
the same package will do for all*

Few problems loom larger in the package planner's mind today than that of finding the right basic packaging approach to meet all the varied demands of today's wildly mixed-up marketing channels.

Once upon a time, not so long ago, retail establishments were categorized according to merchandise carried. There were food stores, drug stores, hardware stores, department stores, and 5 and 10's. You picked your outlets and you packaged for those specific markets.

Today food stores do about 14% of their business in (and get up to 40% profit margins on) non-food items; hardware and drug stores have become variety stores; 5 & 10's are fast becoming junior department stores selling everything from face powder to power mowers; department stores are blossoming out into suburban branches patterned after the help-yourself selling techniques that brought success to the supermarket; discount

PHOTOS COURTESY CHAIN STORE AGE



Which is which?

It's hard to tell a food store (top) from a drug store (center) or a department store (bottom) when you're in a self-service drug and toiletry department today.



Confectionery calls for more than the popular-priced treat or take-home-and-eat type of packaging bought on impulse, in contrast to the traditional gift-boxed assortments. Edward Murrman and William A. Silverman of W. F. Schrafft & Sons Corp. examine the company's Pick-a-Pack packages for self-selection counters and cash registers.

houses are selling groceries in some instances, and if you want an appliance at a discount you may find it in a grocery store.

If he wants to keep up with the tide, today's manufacturer must be in all these markets with packaging that meets the requirements of each.

Some manufacturers have tried to stay in traditional retail grooves for fear of jeopardizing existing accounts. If they did cross retail barriers, they were careful to package quietly under a different label.

But that practice no longer holds. The high cost of space, radio and TV advertising needed to win and maintain brand leadership makes it imperative to package under one advertised brand name. "We must be in every possible outlet with a recognizable label to support our national TV advertising," says the distributor of a new fragrance line packaged to sell from \$1.50 to \$18. He expects to sell items with price tags as high as \$7.50 in variety chain stores.

That's just one evidence of a fundamental change in marketing that is being forced by economic and sociological factors.

► Higher family incomes (41% of American families are now in the \$5,000-and-up bracket) are creating a higher standard of living, with a growing demand for prestige brands.

► The move to the suburbs continues to change

shopping habits. *News Week* estimates that suburbia is home for 42.5 million Americans—a rise of 210% in 40 years and an estimated increase of 18.4% from 1950 to 1957. Homes in the country mean bigger families, thus bigger purchases usually on the once-a-week stock-up trip, preferably at a one-stop shopping center.

► The shorter work week means more leisure time, thus more purchases for outdoor living, travel, entertaining, sports and hobbies.

► Working wives and wives participating in more activities outside the home want more products that save time and labor—thus the high preference for convenience foods and convenience packages with built-in maid service even at higher prices.

It's the retailer's desire to cash in on these changing and expanding needs with the widest-possible line of merchandise under one roof that is making food, drug, variety, appliance and department stores almost indistinguishable in their wares today.

One more factor in the change should be recognized: the profit pinch. When the food retailer finds competition forcing his profit margin on foods down to 16%, he's bound to be interested in health and beauty aids that will pay 30 to 40% and soft goods that will net up to 40%. The same thing happens in other lines; expanding beyond established channels somehow always seems to pay dividends.

Well, you may ask, if they all want the same merchandise, why can't it be packaged the same for all outlets? It just doesn't work that way. There are subtle differences in the way drug, hardware,

The size question



Large sizes have doubled in volume in the past five years. In the ice-cream field, 60% is sold today in half-gallon sizes like Fairmont Foods' unusual Treasure Chest. The half-gallon ice-cream carton was unknown just 10 years ago.

variety and food stores are accustomed to receiving, stocking and displaying merchandise, and unless you take these differences into account in your packaging you will run into opposition.

Toiletries, drugs, hair goods, stationery, infants' wear, hosiery, confectionery and many other classifications still require different display approaches for different markets. Northam Warren, for example, was forced to use three different packaging techniques for displaying hand cream in squeeze tubes for selling in three different outlets: variety stores, food stores and drug stores. A well-known maker of bobby pins is packaging in three or four different ways to meet the needs of the different stores through which he sells. Manufacturers of nationally advertised confectionery are packaging in both high-priced boxed assortment for gifts and small-quantity, popular-priced units for impulse sales in supers, drug stores and variety chains as family or personal treats.

Packaging must be designed to take into consideration the differences in physical layouts of stores, store fixtures, lighting, etc. The current trend to supermarket architecture that provides overhead daylight makes it necessary that package color schemes be equally effective for display in daylight or artificial light.

Consumers with money to spend demand quality and when they buy in a quality outlet, they expect the package to reflect that quality.

Imaginative ideas are needed not only to design packages to meet the different selling conditions, but to produce them economically and efficiently.



Small sizes have declined 28%—but still must often be carried to meet needs of small families and apartment dwellers. Dixie Pride Biscuits by Refrigerated Dough Products, Inc., come in 10- and five-pack foil-laminated, spiral-wound cans.

PHOTO COURTESY EXTRUDED PLASTICS, INC.



Package upgrading gives merchandising power to a product. Pink and white extruded butyrate plastic containers give fashion appeal to Mojud's Toe Guards, can be displayed in one third the space required for previous carton packages.

There are questions that every packager selling in any of these channels today (and who isn't?) should be asking and answering.

Can you improve product and brand identity?

This problem is perennial, but it becomes continually more challenging with the staggering variety of items the average retailer must handle (now about 10,000 in the average supermarket) and with the prodigious growth of controlled-brand competition.

Look in any large food chain store today and see whose products are being favored with the best shelf facings. A battle royal is already going on between manufacturers' pre-sold brands and store-controlled brands. It is no longer a question of advertised brand vs. unadvertised "private" brand, because store-controlled brands are being advertised strongly. Giant retailers themselves are becoming national advertisers. Sears, Roebuck, which does 90% of its more than \$3 billion volume on its own brands, is running a big magazine campaign as well as vast newspaper advertising for a reported budget of something like \$45 million—exclusive of other advertising, including its catalogs which represent another \$45 million.

To stand out on the shelf amidst this fierce competition calls for the most skilled kind of package designing. Monotony and sameness on store shelves leaves the way wide open for some rebel design thinking. Too much "me too" copying among competing packages completely destroys the individual-

And is the consumer happy? Here are some unfulfilled desires

High consumer interest in package convenience was demonstrated in an "ideation panel" conducted by Willard Pleuthner of BBDO advertising agency at the Sixth Annual Food Forum sponsored by the United Fruit Co.

To a selected group of home economists, food editors and others attending the Forum, Mr. Pleuthner posed the following question:

"What new products not now available are needed in the home?" Out of more than a hundred recorded answers, the sizable percentage dealing with package convenience is significant. Package research men will recognize that some of these improvements are already on the way. Here are some of the ideas:

- ▶ Disposable packages that can be washed down the drain.
- ▶ Onions that come in cellophane bags, peeled and cut.
- ▶ Paper towel ejectors to push them out when you need them.
- ▶ Paper coffee filters in a pop-up package.
- ▶ A self-measuring device on packages of detergents, flour, etc.

- ▶ A flour bag with a rigid top which will pour without scattering flour.
- ▶ A square coffee can (for better stacking and better use of shelf space) to facilitate pouring into a canister.
- ▶ Disposable milk bottles that are squat in shape and do not break.
- ▶ In a dispensing package, smaller steel-wool pads. ("They rust once they're used and I have to tear them apart. I'd like little disks that I'd use once, then toss away.")
- ▶ Packaging for cereals that will really retain their freshness; smaller packages without individual wrappings.
- ▶ Fingerholds for heavy bottles like salad oil and bleach.
- ▶ An individual wrapper for bread that will protect the remainder after the first slices are taken off.
- ▶ Spouts that stay on packages.
- ▶ Small tubes of touch-up enamel for all enameled appliances.
- ▶ A dispenser package for tooth paste to eliminate screwing the lid back on the tube.
- ▶ A push-button spice dispenser.

ity so badly needed for effective merchandising.

Brand leadership can change with a radically new package. A notable example was the success of the Stopette deodorant squeeze bottle.¹ Now a new era in the same product field has been started by the current influence of the Ban roll-on deodorant packaging.²

Are you offering your product in acceptable-sized packages?

The A. C. Neilson Co. reports that from 1951 to 1956 preferences for large sizes more than doubled, while sales on small sizes declined 28%. Suburban living and household appliances have given rise to retailer demand for king sizes for soaps and detergents, ice cream, cereals, salad dressing; to the multipacks for soft drinks, beer, light bulbs, candy bars and pet foods. In some quarters stores want larger-sized tuna fish, jams, jellies and peanut butter to please their customers.

The substantial quantities of facial and toilet tissues, beer and beverages, baby foods and pet foods sold in case lots indicate growing acceptance of the case unit by housewives. And more and more retailers are beginning to display case goods in mass promotions—an essential reason for more colorful and distinctive brand treatments on cases.

However, large sizes cannot be carried to the exclusion of small ones. Retailers, particularly in

metropolitan areas, also must cater to the needs of small-family apartment dwellers. The food store in midtown Manhattan would have a hard time getting rid of quart jars of salad dressing or peanut butter.

A new angle to the small-sized package is pointed up in *The American Druggist*. Drug stores apparently now want more miniature-sized packages for health and beauty aids—the very sizes the 5 and 10's have been discontinuing as unprofitable. Customers want them, say the druggists, to carry in purse or pocket or put up in convenient travel kits for a nation on the move with more leisure time for week-end trips and vacations.

Should your package be upgraded?

As incomes have grown, so have wants and needs. With more money to spend, the shopper is willing to pay more for quality. With all stores tending to self selection, retailers want packaging with greater eye appeal. Even the variety stores, aiming at higher and higher price tickets, are getting uppity. The trend is seen in the packaging of all kinds of luxury goods. It is seen, too, in the increasing number of staples packaged with gift appeal. Stores that spend sizable sums on gift promotions want items packaged with extra elegance that inspires the purchase as a gift.

The trend to package upgrading is even reflected in such essentials as drugs. Druggists no longer want dull-looking packages, says a leading package designer, but cheerful ones that make the customer think the product will make him feel better.

¹See "Stopette Spray Deodorant," *Packaging's Hall of Fame*, *MODERN PACKAGING*, April, 1953, p. 136.

²See "Roll-On Deodorant," *MODERN PACKAGING*, Jan., 1953, p. 80, and "Unbreakable Roll-On Deodorant Dispenser," *MODERN PACKAGING*, July, 1953, p. 110.

E. R. Squibb & Sons increased sales 200% on a product formerly sold as a pharmaceutical cream by repackaging it with a cosmetic look after it was found women were using it as a cosmetic.³ Sales of an elastic stocking boomed after the product was smartly re-styled and packaged.

Can your package be more convenient to use?

Neilsen reports show that products with major built-in convenience increased sales by 124% between 1952 and 1956, whereas competing items offering little convenience in use were able to grow only 10%. This is one of the reasons why—despite the acute shelf-space problem to handle new products—retailers will make room for a package that offers a new convenience. It also explains the success of spray containers, aerosols, single-dose and single-use packages, squeeze cans, squeeze tubes, easy-opening tearing tapes. An excellent example of a new convenience package that should find a ready place on store shelves is the new shaker can for Pillsbury flour.⁴

What about packaging for the newer types of outlets—automatic vendors, gas stations, commuter terminals, etc.?

Automatic vending today is a \$2 billion industry, according to Thomas A. Buckley, vice president in charge of sales and marketing of the Vendo Co., Kansas City, who predicts \$4 billion by 1960.

Vending packages today, he points out, are for the most part nothing more than stop-gap adaptations or miniatures of containers developed for shelf sale.

Hot-foods machines bring with them the concept of serving complete meals from vendors to large groups of people. But what happens when Joe on the production line buys a can of beef stew out of a vendor. He gets it good and hot, but he still has to eat it out of a can or transfer it to a bowl. In most cases Joe eats it out of a can uncomplainingly, but how about the pretty receptionist in the front office?

If the stew or soup or chili came in a sparkling new container resembling a conventional piece of tableware, chances are she would quickly accept the idea of eating from it. Unfortunately, such containers as yet are unavailable.

The vending industry has begged for help from packaging interests on cartons designed for drinking purposes. Neither pull-out spouts nor snap-off tops have proved 100% effective for the 4-oz. cartons in which milk for on-premise consumption is usually served.

There is great opportunity for improved packaging for vending machines in the ice-cream field. Novelty ice-cream packages vary to such a degree in size and shape that they are a matter of concern to the vending operator.

Mr. Buckley wants complete meals provided by automatic machines, vended on trays, brought to piping-hot temperatures in a matter of seconds. He begs for new packaging needed for increased use of vending by supermarkets, drug stores and other outlets—especially for after-hour selling in front of the store.

From 75 to 85% of the shoppers at commuter center terminals are men. These outlets, say the operators, require strongly pre-sold brands and highly informative packages to meet the requirements of rapid self service.

Such ideas as electronic stores where the shopper simply rides in a motorized cart or on a conveyor and pushes buttons to have packages pop right into her shopping cart may be a thing of the future, but they are something to think about in considering the package of the future which may be seen only face front.

Nothing is more certain in this world than change. This discussion merely points out some of the changes that are taking place in today's merchandising complex. Perhaps it will provide a helpful association of ideas for every packager in his every-day planning.

Vending-machine packages are nothing more than stop-gap adaptations or miniatures of containers developed for shelf sales, says Thomas A. Buckley, the Vendo Co., who envisions hot-food machines that will serve complete meals on trays, in smart containers resembling table dishes.



³See "Squibb's First Break from Traditional Design," MODERN PACKAGING, MAY, 1957, p. 127.

⁴See "Convenience for Flour," this issue, p. 94.

Wrapless, linerless cartons

Promising new possibilities in high-speed protective packaging

for both frozen and dry foods are seen

in new sealing method that eliminates cost of double packaging

Using a new method of sealing that makes the carton itself a protective barrier, Morton Frozen Foods, Louisville, Ky., is currently marketing frozen pies and other pre-cooked frozen specialties in a tightly sealed, full-colored-printed, waxed folding box which completely does away with an overwrap. High-speed machinery has been specially developed to handle it.

This is one evidence of what is becoming one of the most distinct trends in packaging today: Packaging engineers everywhere are seeking means of building better protective function in the carton itself, trying to eliminate both outer wraps and inner liners.

Cited advantages of the Morton carton are: (1) a more economical package produced at very high speed, (2) a more durable package from the retail standpoint and (3) a more adaptable package for merchandising, in that printing, done by offset, can be changed much more readily to accommodate special offers and selling features than was possible with previous rotogravure-printed overwraps.

The technique could very well upset many previous concepts of double packaging in the frozen-food field as well as in other high-speed protective cartoning techniques. Already in the cereal field, a somewhat similar sealing technique, using a different cartoning machine¹ with a reported speed of 350 per minute, eliminates the customary inner waxed bag. A third type of cartoning machine has been developed, for lower-volume production, to apply thermoplastic seals at 45 to 60 per minute.²

Favorable experience suggests many further possibilities not only in the frozen-food and cereal fields, but for soap powders and detergents, sugar, salt, spices, coffee, cookies, crackers, drugs and chemicals.

The key to the Morton development is a specially developed adhesive applied in specially developed cartoning equipment to produce a very tight thermoplastic seal on over-all, wax-coated filled cartons at extremely high speeds—a procedure often tried

before, but now accomplished successfully, it is claimed.

Morton Frozen Foods has already marketed hundreds of thousands of frozen pies in the new sealed waxed cartons and is currently extending use of the same package as the outer carton for aluminum-tray-packed frozen pre-cooked macaroni, spaghetti, meat casseroles and other items.

The development culminates three years of combined effort in experimental work in cooperation between Morton's, the cartoning-machine manufacturer, the maker of the cartons and suppliers of the adhesive.

The package is identified by its developers as "a one-piece unit, containing all necessary elements for protection, capable of being tightly sealed and easily opened, and operated at high speeds."

Success has been achieved with (1) the use of a highly viscous, extremely rapid-setting, thermoplastic adhesive in combination with (2) a waxed, four-flap-each-end, glued-flap-style carton with full-length top and bottom flaps and (3) cartoning equipment engineered to meet the exacting characteristics of the adhesive.

The quick-setting adhesive (reportedly requiring about one-third the drying time of dextrin glue) accounts for the extremely high production speeds. Unlike most adhesives which require a long-drying compression period, this new adhesive bonds so quickly in the new machine operation designed to accomplish this that the lengthy drying-compression unit at the end of conventional equipment may be eliminated. In a horizontal-type cartoner, Morton's Frozen Pies are being filled and sealed at high speeds.

The machinery manufacturer identifies the development in cooperation with Morton's as the "successful conclusion of our work on a cartoning machine to load and apply a thermoplastic seal to a cold-wax carton."

"Because of the spectacular results achieved in effecting a full seal on the carton," says the machinery firm, "there is a great temptation to speak of the carton as 'siftproof,' 'moistureproof' or 'wa-

¹Stokes & Smith Co., Philadelphia, Pa.

²Clyburne Machine Co., Chicago.

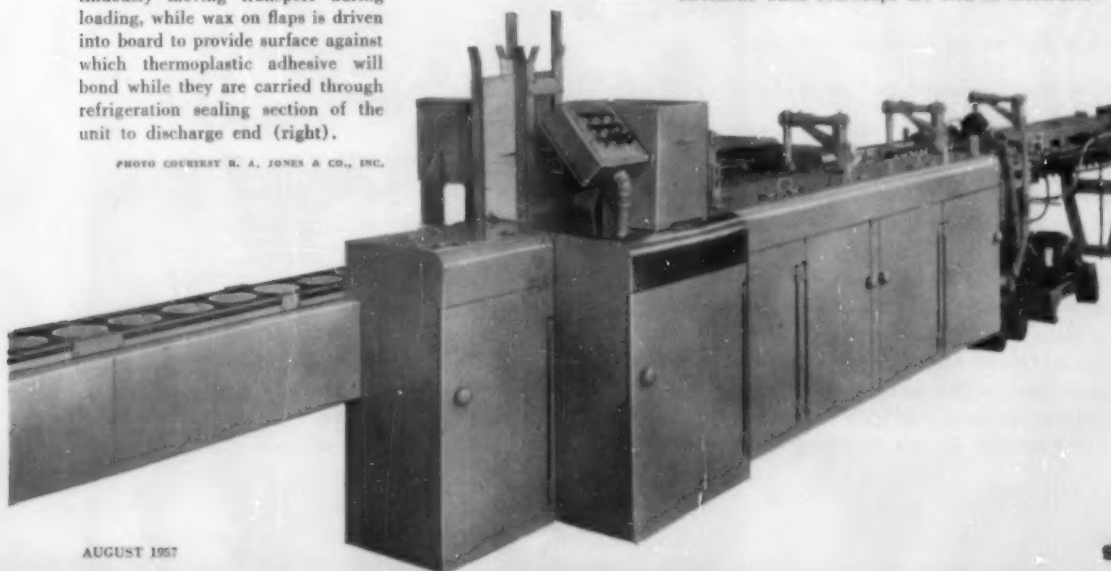
terproof.' While we prefer not to use any of the foregoing terminology in referring to the carton, we are confident in stating that the thermoplastically sealed, cold-waxed carton is superior to any lock-style-carton-plus-overwrap combination. We are guaranteeing the machine to produce a carton seal with fibre-tear seal on each end flap to adjacent end flap in the area of glue application." And the machinery manufacturer guarantees a speed of "conservatively 265 per minute on the machine for 5-in. pies."

Present results, apparently, were achieved by stages. The machinery firm reports that it first accomplished a seal on a dry-wax board—"a relatively easy task." Then, because of "an almost 10-to-1 improvement in water-vapor barrier," attention was turned to cold-wax board of the white bleached sulphite type. First efforts were aimed at holding a seal at zero deg. F, then minus 20 deg. F and finally minus 40 deg. F. when it was found that many frozen-foods packagers required the lower temperature for flash freezing after cartoning. The machinery firm [Continued on page 195]

Supplies and services: Cartons by The Lord Baltimore Press, Inc., 1601 Edison Hwy., Baltimore. Cartoning machine by R. A. Jones & Co., Inc., P.O. Box 485, Cincinnati. Adhesives by Boler Petroleum Co., Inc., 121 S. Broad St., Philadelphia 7, and Pyroxylin Products, Inc., 4851 S. St. Louis Ave., Chicago 32.

Cartoning equipment of the horizontal type—specially developed in cooperation with Morton's, the carton supplier and machinery manufacturer—for loading and applying a thermoplastic seal to a cold-wax carton. Pies enter by conveyor at left. Cartons remain horizontal in continuously moving transport during loading, while wax on flaps is driven into board to provide surface against which thermoplastic adhesive will bond while they are carried through refrigeration sealing section of the unit to discharge end (right).

PHOTO COURTESY R. A. JONES & CO., INC.



One-piece unit is described as containing all necessary elements of protection, capable of being tightly sealed, easily opened and produced at very high speeds. Morton Frozen Foods is now using it for frozen pies and other pre-cooked frozen-food items.



Carton style is a waxed, four flap-each-end, glued-flap type with full-length top and bottom flaps. Directions, which are printed directly on the carton, overcome housewives' objection to losing cooking directions when overwraps are torn or discarded.



A new shaker takes its place on the stove. Pillsbury's blue-and-white foil-wrapped composite can contains 14 oz. of all-purpose flour, is as handy to use as salt and pepper.

Convenience for flour

Pillsbury takes note of modern cooking habits with a foil-wrapped shaker-dispenser can that takes flour out of the cupboard and onto the stove

The newest convert to household convenience is a package for flour. Pillsbury Mills is creating a stir with its new foil-labeled, composite, 14-oz. shaker-dispenser can for flour, which is designed to take that product out of the kitchen cupboard and put it in a place of prominence for handy, frequent use.

The metal-end fibre can has a dual-function top. A perforated section makes flouring meats or dusting cookie tins as easy as sprinkling salt and pepper. Another section in the revolving two-piece top,

half-moon shaped, permits pouring or spooning when larger amounts of flour are needed.

This innovation was adopted by Pillsbury for its famed Pillsbury Best flour after consumer research indicated that housewives today use flour often in top-of-stove cooking—for preparing of gravy, sauces, fried chicken and the hundred and one things that need just a dash or two of flour. The shaker, which sells for about 17 cents and contains all-purpose flour, may also mean a better pene-

tration of a neglected market—the small-unit household and the working wives.

Handsomely designed with restrained use of the foil surface—showing only in the bright blue brand-mark medallion and in a pattern of small Pillsbury "X's" over the white background—the package is expected, too, to become a housewives' conversation piece which will create general good will.

Flour has been a staple household food product for centuries, but its packaging progress has not been remarkable. From the flour barrel it moved to the paper flour bag, then to the carton. And there, for a number of years, its progress stopped. Up to now, when the housewife wanted a little flour for dusting purposes she had to dig down into the bag or carton. Now she can keep her flour supply right at the stove just as handy as salt and pepper. The package blends with any kitchen decor.

Sensitive to the hazards a container is exposed to when it is kept near the stove, Pillsbury's designers favored the foil surface that resists grease stains and moisture and can be wiped clean.

The body of the can is three-ply spiral-wound foil and paperboard formed with conventional metal ends. The top end, however, is perforated, around a half-moon section, sufficiently so that pressure with a spoon will push it inward and create the dispensing opening. Over this top and rolled onto the

chime is a second top made of 0.0035-in. aluminum foil, which revolves easily around the chime; at one point the foil has seven round shaker holes, and in another section it has a half-moon die cut corresponding to the push-out opening in the primary can top below. Simply revolving this aluminum disk, then, gives a choice of shaker or spoon-out opening, or a complete closure.

The pre-printed foil surface is actually an integral part of the can body, being automatically wound, with its kraft backing, as the can is wound, with two plies of conventional fibre-can board.

What success is the shaker enjoying on the consumer market? The best indication is that after a brief test marketing, Pillsbury hurried it along to full national distribution just last month.

The trend toward rapid, convenient accessibility for staples is constantly gaining momentum. Ward Baking Co. has been packaging its bread crumbs in a shaker container for some time, as have several other baking companies. There's a rumor, too, that salt will be packaged for the medicine chest to dispense gargle and mouthwash doses.

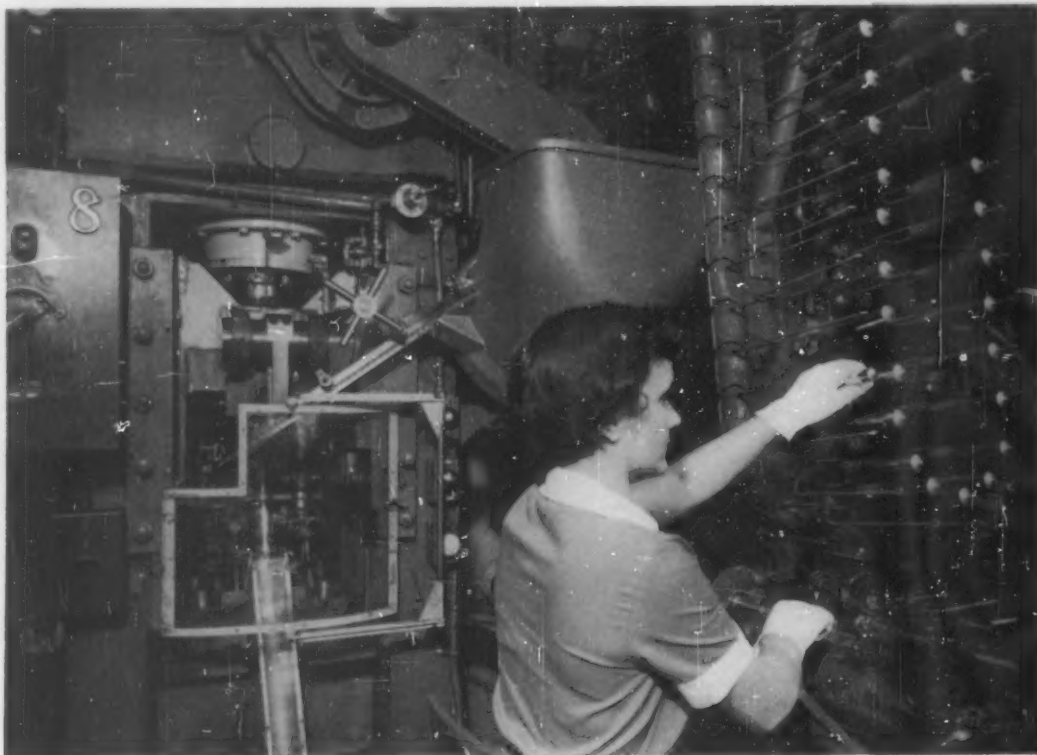
Supplies and services: Composite can manufactured by R. C. Can Co., 9430 Page Ave., St. Louis, Mo., based on a design conception by the Aluminum Co. of America, 1501 Alcoa Bldg., Pittsburgh 19, Pa., supplier of the aluminum disk and label.



Shake or spoon, the new package serves all purposes—a revolving top offers a choice of dusting or spoon-out openings.



PHOTO COURTESY PEERLESS TUBE



Birth of tubes is a high-speed, continuous operation in tube-supplier's plant. Machine to left of attendant takes metal slugs, fed from hopper at right, and impact extrudes each into a tube complete with shoulder and nozzle. Operator trims and threads tubes before trip to coating station.

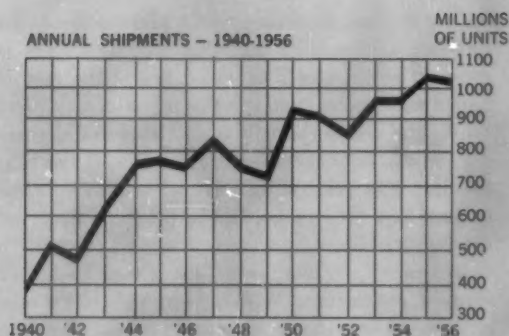
For the third successive year, collapsible metal tubes are being produced this year at a rate of more than one billion units annually. Tube making has more than doubled in the last 15 years as a result of the growing emphasis on convenience packaging in our consumer-oriented economy and the development of new products ideally suited to this handy dispenser-type container.

The \$40-million-a-year collapsible-tube industry is not a "giant" compared with the other package-supplying industries described so far in this series. Annual production is only about 1/40th that of metal cans and 1/20th that of glass containers, for example. But the metal tube is a specialty package valued for the unique service it offers for hundreds of viscous and semi-fluid products. While most of these substances could be packaged in cans or glass

jars at less cost, the convenience of the collapsible tube to the buyer of these products often makes it a merchandising "must."

THE PACKAGE

The American artist, John Rand, invented the collapsible metal tube in 1841 as a handy vehicle for preserving and dispensing pigmented oil paints and the package was soon used by Devoe & Reynolds Co. The idea caught on quickly in Europe, where tubes were first made by machine and adopted for other types of products, such as lubricants and foods. Tubes used in this country were all imported from Europe until 1870, when a com-



Statistics from U.S. Dept. of Commerce and industry sources.

Industry's output has risen from 385 million tubes in pre-war 1940 to more than a billion a year today.

This industry, now supplying more than a billion packages a year, has doubled production in the last 15 years and looks for continued growth in establishing product fields

COLLAPSIBLE METAL TUBES

pany that is still producing tubes here¹ set up a machine based on a German design.

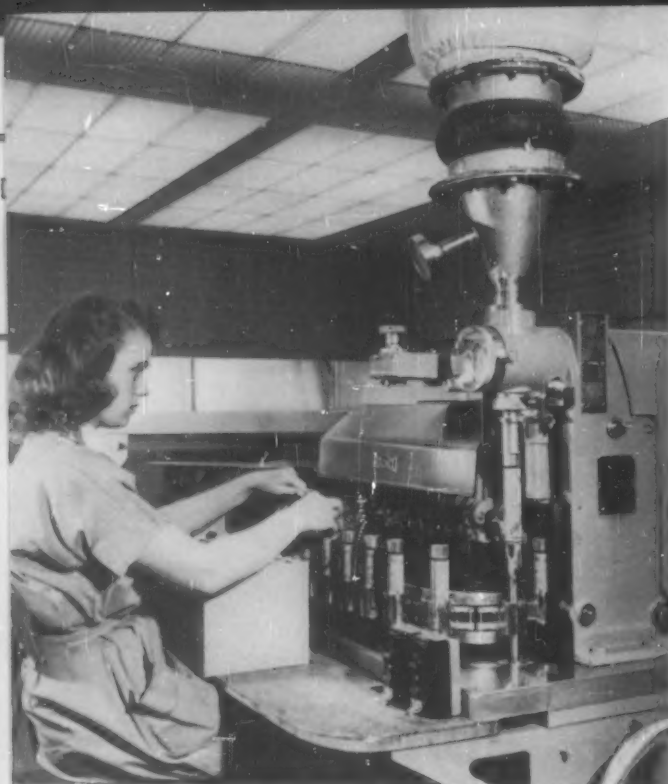
Important impetus was given to the collapsible tube in America in 1892 when Dr. Washington Sheffield, a New London, Conn., dentist, saw its potentialities as a handy, sanitary and protective dispenser for his new tooth-cleansing paste.² His success led Colgate to package its dental cream in tubes a few years later and Colgate's ardent promotion of the paste form of dentifrice in tubes has been credited with swinging the whole dentifrice industry over to this type of product and package, thus giving the collapsible tube its single biggest customer industry. Today more than 500 million collapsible tubes—more than half the industry's

Improvements constantly make metal tubes serve better. Here, molded white urea nozzle eliminates tooth-paste discoloration which might result from abrasion of nozzle threads on lead tube. Tooth paste takes over half of all tube production.



¹A. H. Wirtz, Inc., now located in Chester, Pa.

²In 1900 Dr. Sheffield started making tubes for his own and other products, launching what is now The Sheffield Tube Corp., New London, Conn.



Filling of tubes in new Morristown, N. J., plant of The Mennen Co., one of largest users. Continuous machine fills tubes with shaving cream through open base, then crimps and seals base.

annual production—are used to package tooth paste.

In its ability to dispense viscous substances in easily controlled portions and to keep them fresh, potent and uncontaminated through long periods of intermittent use, the collapsible metal tube is probably unmatched by any other package.

Lightweight, non-porous and unbreakable, the tube is handy for carrying and use, and takes little storage space. A screw-on cap of plastic or metal is easily removed to open the tube; when replaced against the contents, it seals them as originally packaged. Airtight, opaque and impermeable, the metal tube keeps its contents from drying out, shields light-sensitive substances and preserves the scent of a cosmetic cream or the flavor of food until it is used up. Because the tube must be collapsed and may be rolled up as the contents are used, a glance at the tube tells how much is left. The fact that collapsible metal tubes cannot be refilled after the initial use is important to many packagers.

Tubes are supplied in more than 40 standard sizes ranging in diameters from $\frac{3}{8}$ to 2 in.; in length from 2 to 10 in., and in capacity from $\frac{3}{4}$ dram to 16 oz. Today more than half are made of aluminum (a big shift in the last 15 or 20 years), about one-third of lead, one-tenth of tin and the rest of tin-lead alloy or tin-coated lead. Until about 1939, tin ac-

counted for about half of all the collapsible tubes.

The tube-making process usually begins with billets of metal which are melted, cast and rolled into flat slabs, then punched into thick slugs of the desired diameter.

Fed into a die press, the slug is extruded under extremely high pressure to emerge as a tubular body open at one end for filling, with a plain or embossed shoulder and neck at the other end. The body is trimmed and the neck threaded before the tube is coated with enamel and run through a drying oven. While that coating is still tacky, label and decoration in one to four colors are printed on the tube by offset lithography. An external coating of clear lacquer may then be applied to provide luster and protect the ink.

If required, an interior coating is then flushed or sprayed into the tube. With cap screwed on, the tube is dropped head down into one compartment of a sort of expanded egg-crate carton made of chip-board, for shipment to the packager.

In addition to tooth paste, five other basic types of products are major users of tubes. The largest and fastest growing of these is medicinal and pharmaceutical products, using about one-fifth of all tubes. This market for tubes has expanded 66% in 10 years and promises to continue gaining as new and more powerful antibiotic ointments and salves appear, and as more and more non-prescription pharmaceuticals are launched for over-the-counter sales.

The "do-it-yourself" trend is said to be responsible for the increasing use of metal tubes to package household and industrial products such as adhesives, paint colorants, lubricants and putties. Mostly made of lead, these tubes comprise about 16% of total production.

Cosmetics (other than tooth paste) and shaving cream take about 8% and 5% of the tube supply, respectively. The latter market for tubes has been reduced markedly, in the last few years, by the popularity of aerosol foam shave cream and the increasing use of electric razors.

Convenience packaging of foods like jellies, meat paste and cheese spreads in collapsible metal tubes rose 19% last year, but still does not account for even 0.1% of the tubes produced. In Europe, nearly half the tubes made carry food products.

THE INDUSTRY

The industry is composed of 15 companies with 19 plants located in 11 states, according to the Collapsible Tube Mfrs. Council. Twelve of these firms

WHERE THEY GO

(Per cent of tubes used for various types of products in 1966*)

Toothpaste	50.4%
Medicinal, pharmaceuticals	20.6%
Household, industrial	15.8%
Cosmetics	8. %
Shaving cream	5.1%
Food	0.1%
	100.0%

*Estimated by industry sources

are concentrated in the Northeast—all fairly close to a number of leading tooth-paste and pharmaceutical houses which are their principal customers.

Six companies now produce about 80% of the collapsible tubes used each year. One of the largest firms is owned by American Can Co.; another reportedly is owned in part by Colgate. The remaining 20% of tube output comes from nine smaller companies whose annual shipments usually average less than \$1 million each.

Of the 15 present tube makers, two were in existence before the turn of the century; 12 started between 1900 and 1924, and one in 1932.

Collapsible metal tubes are produced in large job lots to meet customer specifications. Tube prices are relatively stable. Average decorated tubes range in price from 2 to 5 cents, depending on size, composition, interior coatings and caps. Sales operations are usually conducted on a direct and personal level to encourage large and continuing orders and to insure customer satisfaction. To accomplish this, most tube suppliers tend to concentrate on producing tubes for only a few specific types of products, permitting greater standardization in their plants.

While the tube-making industry is a competitive one, its cooperative efforts during World War II were especially notable. To cope with the shortage of tin, manufacturers and users of tubes organized a tin-salvage operation that actually produced a profit for the Government. In addition, an improved method for waxing the interior of lead tubes, permitting their use for a wider variety of products, was developed by one company² and made available royalty free to the entire industry.

Members of the industry exchanged ideas, assembled statistical data and promoted research jointly through the Collapsible Tube Mfrs. Assn.

²Peerless Tube Co., Bloomfield, N.J.

for 20 years until this organization was terminated last March. Its work is being carried on through the Collapsible Tube Mfrs. Council, originally set up as a public-relations arm of the association.

DEVELOPMENTS

From the plain-looking container of relatively limited use devised by Rand over a century ago, the collapsible metal tube has evolved into a handsome and versatile convenience package for a wide variety of products.

Basic structure of the tube has changed little, except that the fold-and-crimp seal has almost completely eliminated the use of a metal clip.

Aluminum is favored today because it is lighter in weight and readily available.

Interior coatings of wax or lacquer widened the variety of products that could be packaged in metal tubes and relatively inert plastic coatings have lately proved even more effective in protecting tube contents.

By adding inhibiting chemicals to products of high alkalinity, uncoated aluminum tubes can be used in many cases at a considerable saving.

Special applicator tips made of metal or plastics may be built into tubes or supplied for attachment when the tube is opened to facilitate application of products such as medical ointments, drugs, lubricants and adhesives.

Caps of molded plastic have almost completely replaced metal caps because they are lighter and more decorative. Caps are usually molded of phe-

Open display of tubed products, without individual cartons, is a new trend developed to meet self-service merchandising conditions. This combined shipping-display carton suspends the collapsible tubes in slotted trays so that they do not touch each other or the carton, yet may be easily removed. Carton by General Carton Co.



nolic or urea plastics, but softer polyethylene caps without inner liners are favored in many cases because they do not tend to vibrate loose in shipment. Cone-shaped caps offer the consumer more gripping area than flat caps and have been adopted by several leading tooth-paste brands.

Single-shot tubes—which have no closure, but are opened by puncturing or pulling off a tear seal—hold a measured quantity of product for sampling, batching or for one-dose applications or servings.

A tube-within-a-tube has been devised to keep

emerges from the tube to resemble a peppermint stick. Vegetable coloring is contained in a plastic fitment in the shoulder and neck.

WHAT'S AHEAD

Much greater automation of the tube production line, which should contribute to lower costs, is in the works. The typical production-line set-up now consists of a number of automatic and semi-automatic machine stations connected by a spindle conveyor system. More than 18,000 tubes can be made each day on such a line, but waste is high because the tubes must be handled at each station. Greater mechanization should eliminate most of this waste.

In the continuing search for internal coatings, manufacturers hope eventually to come up with a universal coating that will meet all of their needs.

The demands of self-service merchandising have already begun to bring the metal tube out of its carton shell. Developments in design and decoration of tubes may be expected as they are displayed openly in counter cartons, on skin-packaged cards, on perforated hang-up headers and in other ingenious ways that have appeared in the last two years. Elimination of the individual carton plays up convenience, immediately apparent to the shopper. It also helps hold down packaging cost.

An unanswered question is the effect of competition from polyethylene tubes, recently introduced in the same shape and form as the metal tube. So far, the plastic tubes seem to have found new markets without impinging to any great extent on the established uses of metal tubes. The plastic does not have the dead-fold characteristic of the metal and cannot be rolled up to stay as the product is extruded—which may be an advantage or a disadvantage, depending upon the product and the viewpoint. But, unless there are further major developments in resins and interior coatings, the polyethylene tube cannot hope to contain the aromatics and oily products which are now so well protected in metal tubes.

A field for expansion which has long intrigued the metal-tube industry is food products. It is difficult to understand why 50% of Europe's tubes are used for foods and less than 0.1% over here. After a serious effort over the last three years, some in the industry still feel that success can be achieved in the luxury food field. But the polyethylene tube has been more successful in this field and many of the metal-tube makers appear more inclined to concentrate on improvements and efficiencies in the product fields where metal has clear-cut advantages.



Strippable lithography is a recent development of great value to drug products which may be sold either by brand name or by prescription. Holland-Rantos confines strippable section to upper part of tube, thus a finished appearance is retained if prescription label replaces this section.

two reactive chemicals apart, mixing them only at the moment of use.

Strippable lithography simplifies packaging of pharmaceuticals sometimes sold by prescription. The attractive label designed for over-the-counter sale is easily peeled off for replacement with the pharmacist's gummed paper label. For antibiotics packaged in such tubes, batch-control numbers are die stamped into the crimp at time of filling.

A white plastic neck protects tooth paste packaged in wax-lined lead tubes from discoloration that might result from abrasion between the cap and a metal neck. This improvement has been adopted for Procter & Gamble's Crest tooth paste.

An intriguing recent development, adopted by Lever Bros. for its tooth paste appropriately named "Stripe," is a means of striping the paste as it



Telescoping cases, used in two sizes, package hundreds of variations of industrial taps and tools securely held in blocks of foamed polystyrene in which they are inserted by machine. Specific information is imprinted by machine on pressure-sensitive labels; this change alone is saving \$50,000 a year. Packages closed (inset) show label placement. Smaller package will contain a standard pack of cigarettes.

Tools in plastics

A polyethylene cigarette case and a chunk of foamed polystyrene provided the basic idea which a packaging engineer has built into a mechanized, cost-cutting, sales-building operation

After two years of development, a new type of package to hold costly taps and carbide cutting tools is hailed as a major step forward in solving problems of protecting this "industrial jewelry." Strikingly simple and economical, the new idea makes it possible to hold thousands of variations and sizes of these small precision tools in blocks of foamed polystyrene in just two basic sizes of polyethylene telescope boxes like those commonly used as pocket cigarette cases.

The story illustrates what an industrial packaging engineer blessed with imagination can do in adapting ideas from totally different fields. From the original concept by Roy Hill, who is superintendent of traffic, maintenance and stores, and functions as packaging expert of the Besly-Welles Corp. of South Beloit, Ill., the development has progressed to the point where it now embraces semi-automatic

packaging machinery and a system of labeling which alone will save more than \$50,000 this year.

The new packages offer superior anti-rust protection over the old paperboard boxes, tools are easier to remove from a foamed polystyrene block and the foamed block does not absorb damaging moisture. The boxes stack well, are color coded for fast identification at Besly's and customers' plants, and have good re-use value. All this at a saving of one to five cents per package.

Hill followed up an improved package by creating new packaging equipment, adapting a commercially available label printer to make Besly's own pressure-sensitive labels as it needs them and reducing the number of corrugated shippers from 34 to just five basic sizes.

Besly's old containers, typical of those in the taps and carbides field, consisted of paperboard



Packaging line handles hundreds of thousands of dollars worth of costly tools. Finished products flow into this point, where they are inserted in polystyrene-foam blocks by special machinery, then cased and packed. Note packaging supplies in bins underneath the table.

set-up boxes or metal-edge boxes, with two trays, each compartmented to hold six taps. Tray dividers had to be laminated with glassine or some other oil-resistant material.

The old double-tray boxes called for costly and time-consuming hand-packaging operations. Boxes came into the plant assembled, had to be disassembled, hand filled and then re-assembled.

Often Besly receives orders for standard ground taps that require slight reworking to meet specifications for a particular customer. Taps usually are drawn from inventory for this purpose, which previously meant opening and discarding an entire package. The new containers eliminate these quantities of "destroyed" packages.

Secret of the new package's success lies in the unique properties of foamed polystyrene. This light, cellular material, lately finding its way into the industrial field,¹ will not rupture when thin, rigid objects are pushed into it. The shank of a tap can be pushed into a block of foamed polystyrene just as a nail can be driven into wood.

Semi-automatic packaging operations are made possible by these qualities of foamed polystyrene, since shanks make their own retaining holes as they are pressed into a rectangular block of the material. The threads and flutes (cutting end of the tap) are exposed above the block.

Besly obtains foamed polystyrene with a density of about 2 lbs. per cu. ft., which is cut to within $\frac{1}{64}$ -in. tolerance.

Hill's original concept was to create a unique re-use package in the taps and carbides field. A polyethylene telescope cigarette box was selected for testing, which was fitted with a foamed polystyrene block for holding the steel cutting tools.

First field tests of the cigarette box,² imprinted with Besly's name, indicated it was a superior package and greater sales resulted. However, the case was too flimsy and it would not open easily.

Hill took Besly's problem to a polyethylene molder and ordered special molds to produce two sizes of boxes, made to specifications which overcame these problems. One polyethylene telescope box is the cigarette-case size; the second is $1\frac{7}{8}$ in. wide by $4\frac{1}{4}$ in. long. Both sizes come in four colors—orange, red, green and blue—which provide a color code to distinguish different types of taps. A fifth color, white, is being added for Besly's new line of carbides. These are currently being hot stamped in attractive chrome lettering.

Today about 80% of Besly's taps are going into the new packages; most of the rest are larger sizes, which are plastic dip coated.

On the packaging line the tops, bottoms and foam inserts come in as three separate supplies. After the blocks have been placed in the bottoms, the two package components are binned on the line.

For the larger package, Hill developed a special vertical pneumatic press for pushing the tap shanks into the foamed block. Taps—shank end up—are loaded into a matrix at the bottom of the press and the foamed block is fitted—upside down—in a clamp on a vertical plunger. As the operator brings down the plunger, a pneumatic system is tripped and presses the foamed polystyrene block down onto the taps at 60 lbs. of pressure.

For the smaller cigarette-case size, a hand jig has been devised to produce similar results. Taps are forced sidewise into the foamed block a row at a time.

Both packages normally hold a dozen taps in

¹See "Molded Expanded Polystyrene," MODERN PACKAGING, Feb., 1957, p. 121.

²See "Steel Taps in a Re-Usable Cigarette Case," MODERN PACKAGING, April, 1955, p. 159.



Packaging engineer Roy Hill, responsible for innovation, examines a completed package of Besly taps while operator in the background brings a plunger containing box base and polystyrene block down on a new set of taps. Tool shanks drive their own holes in polystyrene block.



Smaller packages are filled with a hand jig which presses tools sidewise into foam block.

two rows. Both the press and hand jig insert the taps so the exposed sections of the taps are always the same height, $1\frac{1}{4}$ in. for the larger box and $\frac{7}{8}$ in. for the smaller. This means that closed packages, regardless of contents, are always uniform in size.

Labeling was another problem. Besly previously had to carry an extensive inventory of hundreds of different labels which often had to be stamped again at the plant. A newly installed machine now imprints rolls of pressure-sensitive labels, fed into the label printer on a web of backing sheet. The printer stamps up to nine pieces of information on a label at a time and labels are made up as needed. Part of the labels are pre-printed in colors to match the code of the boxes.

The shipping cartons were reduced from 34 to five and are sealed with glass filament tape or steel strapping. Such unassuming corrugated containers may hold \$5,000 worth of tools. Yet the company has sought out packaging savings wherever possible.

The packages themselves have many re-use values. In addition to use as cigarette cases, Besly found, the polyethylene boxes are used to hold fish hooks, nuts and washers, screws and file cards. Even at shipments that may go up to 1,000 boxes a day, Besly knows some of the new containers still are "borrowed" by executives among customer companies or re-ordered to obtain the attractive new boxes.

Supplies and services: Polyethylene boxes molded by Federal Tool Corp., 3600 W. Pratt Blvd., Chicago 45. Foamed polystyrene blocks fabricated from Dow's "Styrofoam" by Polyfoam Packers Div. of Glo-Brite Products, Inc., 6415 N. California Ave., Chicago 45. "Pres-a-ply" labels and "Dial-Set" printer, Model D, by Dennison Mfg. Co., 300 Howard St., Framingham, Mass.



Label imprinter eliminates multitudinous inventory. Web of pressure-sensitive labels feeds into machine on paper backing; variable data is changed by operator to meet current requirements.

Shipping cases—reduced from 34 to just five sizes of corrugated boxes—are bound with either glass filament or steel tape. A single box may contain a shipment valued as high as \$5,000.





Cigarette lift

Philip Morris, Inc., which was first to launch Marlboro cigarettes in the now well-known flip-top box, has come up with another development to make this package even more convenient to the user. In the sturdy paperboard container, cigarettes are packed so tightly that it is sometimes difficult to pull the first one from a newly opened box without flattening or tearing the tip. To eliminate this annoyance and to simplify the opening operation, a pull tape has been incorporated into the Marlboro package. Made of $\frac{1}{4}$ -in. wide glassine, the strip is about 9 in. long and colored red to match the package design. Cemented inside the foil inner liner at the front of the package, the tape extends down under the cigarettes and up behind them to fold over the top. When the box is flipped open and the front foil strip pulled out, the top end of the red tape is exposed, ready for use. A gentle upward pull lifts five cigarettes in the center of the pack so that they rise in three tiers, positioned for easy withdrawal.

Supplies and services: Glassine tape by Westwood Paper Co., Inc., 7 Waverly Pl., New York 3.



DESIGN HISTORIES

Lift-up flap invites inspection of sausages



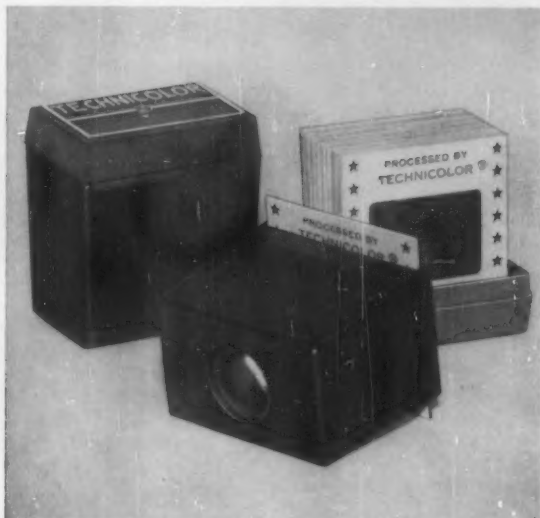
Shoppers who want to see what they are buying can lift a flap and look through a window at frozen pure pork sausages packaged in a new aluminum foil cook-in tray adopted by Mott Haven Packing Co., Inc., New York. The new package features a paperboard lid bearing an appetizing vignette illustration of the sausage in full-color lithography. The lid also shows a canal scene symbolizing the company's trademark. Made of waxed paperboard, the lid is predominately royal and sea blue in color.

Under the trademark on the lid is a lift-up flap that invites the prospective purchaser to inspect the product through a transparent cellophane window, yet prevents customer handling and protects the sausages.

The sausages may be cooked in the convenient foil pan in which the product is packaged. The company reports a steady increase in sales since it switched to this package from a window carton.

Supplies and services: Lid with cellophane window by Milprint, Inc., 4200 N. Holton St., Milwaukee 1, Wis. Foil cook-in tray by Ekco-Alco Containers Inc., Wheeling, Ill.

Color-slide storage box doubles as viewer



Technicolor N. Y. Corp. now returns processed 35-mm. color transparencies in a permanent storage box that also serves as a handy viewer. With slides set in the inverted box cover, a single slide can be inserted in notches at the top of the black base and viewed against any diffused light source through a lens built into the base. Recessed for maximum protection, the polystyrene plastic lens magnifies the picture six times. The red cover fits tightly to keep out dust, moisture and light, and the company's logotype is molded on top in a frame that provides a finished area for writing in label data. Each box holds 24 slides; 36-exposure films are returned in two storage-viewers.

By making it easier for photographers to carry and view slides, the new package (patent pending) is expected to popularize color slides as a gift and to encourage greater use of 35-mm. cameras and accessories.

Supplies and services: Container molded by Foam Forms, Inc., 37-28 Ninth St., Long Island City 1, N.Y., using Koppers "Super Dylan" polyethylene plastic, with lens of polystyrene and lid of high-impact polystyrene plastic.

DESIGN HISTORIES



Multi-use dart shipper

A new corrugated display-shipper that doubles as a handy storage and carrying case has solved merchandising and pricing problems for the lawn game set made by The Hurl-O-Dart Mfg. Co., Indianapolis, Ind. Formerly, the four 18-in. weighted darts and two plastic strips used to form ground targets were shipped in a full-flap corrugated container with a wood holder serving as a merchandising stand and a storage and carrying rack. Retailers often failed to unpack the costly rack for display purposes. The new carton opens on the counter to exhibit the darts, held in a folded, die-cut insert, beneath an illustration showing how the game is played, printed inside the cover (top photo). When closed, the corrugated container resembles an attaché case with die-cut carry handle for convenience (bottom photo). Instructions printed on the box eliminate the cost of a separate sheet and prevent loss by the purchaser. Savings from the new package without a wooden holder enabled the company to avoid raising the price of the set despite rising costs.

Supplies and services: Carton designed and produced by Inland Container Corp., 700 W. Morris St., Indianapolis 6, Ind.

Pull tab opens biscuit tube end to end



To make it easier for a housewife to get prepared biscuit dough from the package, a new container that also provides improved appearance and longer shelf life has been adopted by The Borden Co., New York. The composite container is made of light fibreboard laminated with aluminum foil on both sides and has metal ends. An overlap extension of the cylinder wall, held in place by a special adhesive, serves as a pull tab. When the tab is pulled back, the package opens with a consistent all-around-the-end tear, yielding pre-cut biscuits that are easily separated for placing in the oven. A slow-sealing device in the top seam allows gas to escape during the 3 to 4 hrs. while the biscuits are rising. The outer layer of aluminum foil is said to give added protection against moisture, increasing the shelf life of the product, in addition to improving the appearance of the package. The surface of the inner foil is coated with heavy wax for moisture resistance.

Supplies and services: Container and adhesives by American Can Co., 100 Park Ave., New York 17.



DESIGN HISTORIES

Hard sell for the stationery department



Sleeve bands for a new line of stationery products manufactured by Wesley & Winter, Inc., and sold through its associate, Armor Products, Inc., Linden, N. J., reveal pointedly the bold supermarket design techniques permeating all product fields today.

The company went to an independent package designer for the strong new Armor logotype and crown symbol trademark printed in red and black. Emphasis on product designation and price as well as quantities are other features of these new packages, designed for hard, self-service selling in highly competitive markets. The design device of thin black lines extending across the panel to the edges of the sleeve was selected to make white stationery seem whiter and pastel colors, bright and gay. The sleeve bands were planned so that the entire line can be printed with a minimum of plates by the use of mortised areas for easy change of type and slugs.

Supplies and services: Design by S. Jay Kent, 12 E. 46 St., New York: 17.



Card carries a torch

Skin packaging pocket-size blow torches and torch kits on printed, die-cut cards makes them easier to merchandise for self service, according to Kidde Mfg. Co., Inc., Bloomfield, N. J.

Alone or with accessories, the company's Jet King pocket-size butane torches are now mounted on glossy white coated boards printed with trade identification and descriptive copy, all visible through tight-fitting, thermoformed vinyl sheet. Instructions for use are printed on the back of the card. The packages are die cut for hanging on a rack or may be displayed standing up or flat on a counter in hardware or department store.

The skin-tight film cover protects the torch and prevents loss of accessories.

Supplies and services: Blister card by Continental Can Co., Inc., Gair Boxboard & Folding Carton Div., 530 Fifth Ave., New York 36. Vinyl plastic film by Bakelite Co., Div. Union Carbide Corp., 30 E. 42 St., New York 17. Skin-packaging equipment by The Auto-Vac Co., 1984 State St. Ext., Bridgeport 5, Conn.

DESIGN HISTORIES



'Adjustable' candles

A new convenience feature on a package adopted by Will & Baumer Candle Co., Syracuse, N. Y., shows how the exercise of a little ingenuity in package design often can add a helpful consumer aid at little or no extra package cost.

This company's new candle packages are aimed to solve the annoying problem of fitting candles into different-sized candlesticks without wrapping paper around the base of the candle or dripping wax into the socket to make the candle stand upright. Taperlite, Twistolite and Tavern candles are now supplied in folding paper boxes equipped with two perforated disks. Easily pushed out, the disks can be set on the oversized candlestick sockets. When a candle base is pressed down on the center of the disk, it moves into the socket and holds the candle securely upright in the candlestick. Directions are printed on the packages along with tips on candle etiquette.

Supplies and services: Box by National Folding Box Co., Div., Federal Paper Board Co., Inc., 405 Lexington Ave., New York 17.



Full-color reproduction and high gloss on new waxed wraps make dates look like they could be picked off wrapper and eaten. New package gleams from all angles without "dead spots" as in old cellophane-wrapped package (top photo).

New Dromedary

*First change in 20 years,
new printed overwrap for dates
proves that today's
photographic reproduction of contents
can be more effective than a window view*



Reverse panels with realistic product illustration do as much visual selling as package face. Helpful recipes suggest new product uses.

Tangible evidence of what's going on—or should be going on—behind the scenes of practically every long-established company is the radical change in the famous tango-colored package for Dromedary Dates.

For 20 years The Dromedary Co., New York, Div. of National Biscuit Co., has been selling pitted dates in a two-piece, telescope-style, acetate-window carton overwrapped with amber-colored cellophane through which the product was visible.

This was a fine package for the late '30s, but marketing concepts have changed, demanding better display and greater customer convenience. So have methods for producing packages with improved protection and mechanical efficiency.

The amber cellophane—advisable for light protection of the product—gave good color identification, but added nothing to appetite appeal. In fact, the dates were only dimly visible and in crowded quarters did not look as luscious as they really are.

New Dromedary Dates packages, introduced this month, have no window and no cellophane. Gone, too, is the two-piece carton construction with hand-inserted protective insert. In its place is an automatically set up, one-piece, inside-glassine-laminated, top-opening folding carton, overwrapped with full-color rotogravure printed, high-gloss, waxed bleached kraft.

The new packages are being offered in two sizes—an 8-oz. single package and a 1-lb. twin package.



Twin pack permits half of 1-lb. quantity to be used while other half may be store away—a packaging idea that encourages a larger unit sale. Convenient tear strip facilitates easy opening.

The latter contains two 8-oz. cartons, overwrapped together with easy-opening tearing tape so that contents of one 8-oz. package may be consumed while the other is stored for future use.

The company points out important advantages of the new packaging program:

1. The color photographic reproduction of the product on the wrap gives amazingly new realism and appetite appeal to the product under modern store lighting in comparison with a view of the dates through the tango-colored cellophane. Here is a case where actual visibility proved less effective than a printed reproduction.

2. The new carton and waxed overwrap give considerably longer shelf life to dates, keeping them fresh without drying out, and provide a stronger package without breakage. As Dromedary Dates are pasteurized with heat after cartoning, the company formerly had considerable trouble with cellophane packages sticking together in the shipping cases, causing breakage when retailers separated them while unpacking. This problem had been overcome by slip sheeting the packages in the shipping container, but this, of course, added another handling step now eliminated with the new packaging, the company says.

3. The glassine-laminated carton prevents the dates from sticking to the inside of the carton without use of protective insert—thus easier and neater for the consumer to remove.

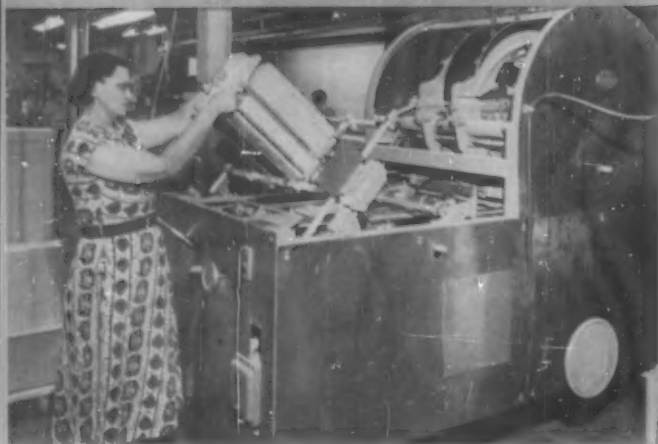
4. The top-opening, one-piece carton is more convenient to open and reclose, thereby encouraging sale of dates not only for cooking, but for eating.

5. Shipping cases with tear strips are arranged for easy division of case lots in filling smaller orders and for quick price marking in a uniform spot printed on one side panel of each package.

Productionwise, the new packages, which are being produced on a completely new line set up with new equipment in both the company's Lyons, N. Y., and Woodbury, Ga., plants, mean greater



New packaging line steps up production efficiency



Automatic forming machine sets up the one-piece, top-opening carton.



Filling is done by semi-automatic machines.



Check weigher assures accurately measured fill.

efficiencies necessary to meet rising packaging costs.

No one department at Dromedary apparently is responsible for this important over-all package change. Ideas for improvements began brewing in several directions. Salesmen started asking for a more effective package to meet display conditions in retail outlets. The home service staff suggested package units that would fit more logically into recipe requirements—usually 4 and 8 ounces.

Improved packaging materials and advanced mechanical techniques made the production men aware of possibilities for a more protective package that could be produced more efficiently.

The subject of new packaging was a matter of top management study for several years.

One point on which all departments as well as the company's advertising agency agreed: No basic change should be made in the orange color of the packages, which Dromedary calls "tango," formerly obtained by the amber-colored cellophane.

This was credited as being one of the company's most valuable assets in establishing its enviable top brand leadership in date merchandising (sales greater than all other brands combined, according to copy on the back of the old packages).

An essential objective when the cellophane over-wrap was abandoned, therefore, was capturing the desired shade of tango for the printed wrap to complement the faithful, full-color product reproduction now on both faces of the new packages.

In color scheme, the new printed wraps duplicate the red, brown and tango of the former cellophane-wrapped package, with the added mouth-watering attraction of the product illustration. Serif lettering of trade name diagonally across the face of the package maintains strong logotype identity,



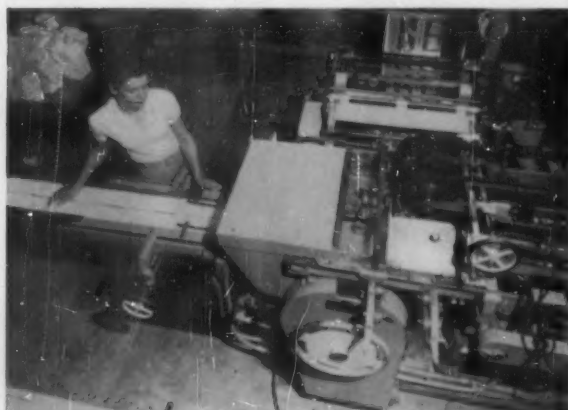
Pasteurization takes place after cartons are filled and closed. View shows packages being transferred from cooling tunnel, ready to wrap.

but stands out a little more sharply. Across the top are the words "Fancy imported . . . Pasteurized." The only other elements are: the net-weight designation and a small reproduction in color of the famous old Dromedary trademark. The back panel also reproduces the product in full color, thereby giving appetite appeal and product identity to both surfaces. Two handy recipes suggest uses for dates.

Close cooperation with the supplier of the wrap assured superior printing quality. A high grade of hard-surfaced, blue-white bleached kraft was selected for strength and safety at corners and folds. Six-color rotogravure printing on a new press gives the close registration and color control that assures faithful reproduction and offers economy on long runs. The sheet, which is high-gloss waxed on both sides, provides long protection against moisture loss of contents, a brilliant surface, efficient sealing characteristics and a hard finish that protects against scuffing from handling. Inks used are as odorless as are known to the gravure industry and great care is taken from start to finish in exhausting the maximum amount of solvent-laden air from the press ovens.

The glassine-laminated carton, made in the National Biscuit Co.'s own carton plant at Marseilles, Ill., not only makes the dates easier to remove, but has properties to withstand the very exacting humidity and temperature conditions of the pasteurization process. Cartons are embossed with the words, "Dromedary Dates," to retain identity when the wrapper is removed.

On the new packaging production line, the cartons are formed in an automatic carton former, transferred to a semi-automatic filler for random packing of the dates. After filling, the cartons are



In tandem, packages for the twin pack move toward the automatic wrapping machine to receive wrapper equipped with cellophane tearing tape.



Bright new package comes off line with greater appetite appeal and longer shelf life.

check weighed before passing through an automatic machine for carton closing. Filled cartons pass through the pasteurization unit and cooling tunnel prior to transfer to the automatic wrapping machine. For the twin pack, Dromedary has developed its own conveyor mechanism to feed the cartons in tandem to the wrapping machine. Completed packages are automatically case loaded and sealed. Two duplicate line set-ups have been installed in both of the Dromedary packing plants to handle the production and all four are interchangeable for producing the 8-oz. package or the 1-lb. twin package. Speeds average about 60 per minute.

From an over-all cost standpoint, the new packages are comparable to the old two-piece cellophane package, Dromedary reports, but they offer the superior protection, improved display and convenience features so essential to acceptance today.

Supplies and services: Rotogravure-printed wraps by The KVP Co., Kalamazoo, Mich. Cellophane tear strip by The Dobeckmun Co., 3301 Monroe Ave., Cleveland, Ohio. Carton forming, closing and wrapping equipment by Package Machinery Co., East Longmeadow, Mass. Filling machines by U. S. Automatic Box Machinery Co., Inc., 18 Arboretum Rd., Roslindale, Boston 31, Mass. Check-weighing machine by Hi-Speed Checkweigher Co., Inc., 605 W. State St., Ithaca, N. Y. Case packers by Food Machinery & Chemical Corp., Canning Machinery Div., 333 W. Julian St., San Jose, Calif. Case sealers by A-B-C Packaging Machine Corp., Tarpon Springs, Fla.



Packaging

Pageant



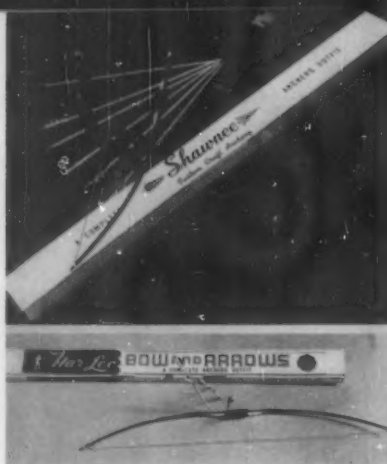
Packaging

Pageant



Packaging

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- 1** Colorful new corrugated shippers for L. B. Helbig Co.'s bow-and-arrow sets are reported to have eliminated former product damage and are attractive for display and customer carry-out. Box, Stone Container Corp., Chicago.
- 2** A dressing-table look is achieved for Shulton, Inc.'s new Desert Flower Beauty Clean lotion by encasing the silk-screened bottle in a decorative "basket" of white polyethylene. Bottle, Carr-Lowrey Glass Co., Baltimore. Silk screening, Albert Sierad Co., Mamaroneck, N. Y.
- 3** In Britain, double cellophane protection is given new car-wash detergent tablets by Lister Equipment, Ltd. Five 6-tablet heat-sealed packets with a printed label card are cellophane overwrapped, then tape sealed. Cellophane, British Cellophane, Ltd., London, England.
- 4** Appetite-appeal illustrations against a red and white gingham background design for Eddy's Bakeries' bread wraps make the products stand out in crowded displays. "Tyton" wraps, Marathon Corp., Menasha, Wis.
- 5** The polyethylene bag used by Model'N Mold Co. is printed so that the design, superimposed over the three disks of modeling dough, resembles a cartoon body. Perforated header makes it suitable for rack display. Bag, Central States Paper & Bag Co., St. Louis, Mo.
- 6** Luscious-looking barbecued foods reproduced on Jackson Brewing Co.'s six-can carry cartons promote Jax beer as a complement to outdoor meals. Back panel gives recipes using beer as an ingredient. Carton, Gaylord Container Corp., Div. of Crown Zellerbach Corp., St. Louis, Mo.
- 7** A removable paper panel superimposed over a regular six-bottle carrier carton of Tom Collins, Jr., promotes a special-offer deal. Later the pressure-sensitive ad panel is pulled off, leaving a standard carton. Ad-panel carton, Atlanta Paper Co., Atlanta, Ga.
- 8** Economical one-trip fibre drum with inner polyethylene bag for John A. Roebling's Sons Corp.'s high-carbon wire replaces returnable wood barrels. Fibre drum, Hinde & Dauch, Sandusky, Ohio. Polyethylene film, Bakelite Co., Div. of Union Carbide Corp., New York.
- 9** A rich-looking presentation case for Schick Dry-Shaver is made of fibreboard, with stitched simulated-leather base. Box, Farrington Mfg. Co., Needham Heights, Mass. "Texol" simulated leather, Farrington Texol Corp., Walpole, Mass. Etched aluminum seal label, Etched Products Corp., Long Island City 4, N. Y.
- 10** Acetate-foil-vinyl laminated pouches picturing the regular retail bottle hold samples of Butcher Polish Co.'s new Beau brand liquid furniture polish. They are fastened to quart and gallon cans of the company's floor wax as a premium. Pouch, The Dobeckmun Co., Cleveland.
- 11** New overwraps designed by Albers Milling Co. for Carnation Corn Flakes feature a price reduction and premium offer





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14



for scale models of the U. S. Fleet, yet retain brand identity. Basic package design, Jim Nash Associates, Inc., New York. Wraps, Western-Waxide Specialty Packaging Div., Crown Zellerbach Corp., San Francisco.

- 12 Smokey-Joe's Foods' barbecue sauce is distinctive in stock telescope-shaped bottles. Cartoon character on label is repeated on cellulose seals and shipping cases. Bottles, Glass Containers Corp., Hayward, Calif. Labels, Mission Label Co., San Jose, Calif. Caps and cellulose seals, Latchford Package Co., Los Angeles. Shippers, Fibreboard Paper Products Corp., San Francisco.

- 13 Five Day Labs. adopts the ball-dispensing principle for its Five Day Roll-On deodorant. Bottle, fittings and closure, Owens-Illinois Glass Co., Toledo. Foil label, Foilcraft Printing Corp., Brooklyn. Carton designed by Robert Zeidman Associates, New York, and supplied by Acme Paper Box Co., Chicago.

- 14 Mead Bakeries, Inc., reports 500 to 600% sales increases within months after introducing gold-colored foil wraps with full-color vignettes for its raisin-orange bread. Wraps, Milprint, Inc., Milwaukee. Aluminum foil, Aluminum Co. of America, Pittsburgh.

- 15 A larger oval canister with metal ends and screw cap contains 1 lb., 12 oz. of Wrisley's Superbe Bath Crystals, twice the former amount. Canister, W. C. Ritchie & Co., subsidiary of Stone Container Corp., Chicago.

- 16 New "designed-for-the-table" container with sloping waistline for apple jelly is promoted by Kroger Co. as a "Table Server." Jar, Armstrong Cork Co., Lancaster, Pa. Twist-off cap, White Cap Co., Chicago.

- 17 Wide-mouth openings on new jars of R. T. French Co.'s Instant Garlic and Onion Powders make dispensing of contents easier. Jars and metal caps, Hazel-Atlas Glass Div., Continental Can Co., New York. Lithographed paper labels, Rochester Lithograph Mfg. Corp., Rochester, N. Y.

- 18 Morning Treat Coffee Co.'s new bag laminated of aluminum foil, acetate film and bleached kraft, lined with amber glassine, is selected to give Morning Treat coffee longer air and water-vapor protection. "Lamofoil" bag, Shellmar-Betner Div., Continental Can Co., New York.

- 19 A simulated "battery" box used for physicians' samples dramatizes high potency of Eli Lilly & Co.'s Vi-Mix Drops vitamins. Folding-carton base has a set-up box cover with colored wood plugs glued on to simulate battery filler vents and current connector. Container, Paper Package Co., Indianapolis, Ind.

- 20 By packing Zip-Strip paint and varnish remover in quart, pint and half-pint sizes six to a case and gallon containers two to a case, Star Bronze Co. offers jobbers and dealers the advantage of full-case discounts without purchasing in full dozen lots. Shipping cases, Canton Corrugated Box Co., Canton, Ohio, and H. Bettis Co., Zanesville, Ohio.

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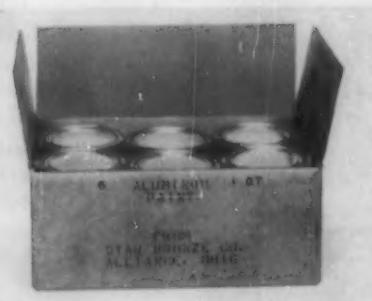
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New shape for ice cream

Sweden's promising tetrahedral container, formed, filled and sealed in-plant from a single roll of paper, takes hold in U. S. with first application to ice cream

Halfway round the world from its place of origin in Sweden, the much-discussed tetrahedron-shaped paper milk container,¹ automatically formed, filled and sealed from a single roll of paper, makes its debut in the United States as a completely new kind of single-service ice-cream package in Safeway Stores.

The unusual package, which has great potentials for economy because of its simple method of in-plant manufacture, has previously been tested in this country on milk² and orange juice.³ The first successful full-scale application to ice cream, by Regal Ice Cream Co., Seattle, Wash., a subsidiary of Safeway Stores, is particularly significant because it points up the broad-scale opportunities in this country for the unique, polyethylene-coated paper container and the ingenious Swedish machine which produces it. In Europe it has been used primarily for milk and cream.

The recent U. S. applications to fruit juice and ice cream are beginning to suggest many additional possibilities for such products as honey, jam, jelly, salad dressing, cheese spreads, syrup and other hard-to-package fluids and semi-fluids, particularly in low-cost, small, single-service units for restaurants and institutional use.

Economy of this package is inherent to its unique method of manufacture. The compact machine at Regal Ice Cream—only 10 ft. long, 6 ft. 7 in. wide and 10 ft. high—does the complete job of simultaneously forming and filling 10,000 packages of ice cream from a single roll of plastic-coated paper of about 100 lbs. basis weight at rates up to 4,200 complete packages per hour.

¹See "A New Milk Package," MODERN PACKAGING, Oct., 1951, p. 177.

²See "Tetrahedral Milk Pack," MODERN PACKAGING, Nov., 1956, p. 234.

³See "Tetrahedral Juice Pack," MODERN PACKAGING, March, 1957, p. 178.



Perforation, made after completed package is hardened, provides easy-opening convenience.

The peculiarly shaped container consists of four planes, each of which is an equilateral triangle. Because of this shape, it is often loosely referred to as a pyramid. Geometrically, however, a four-plane polygon is defined as a tetrahedron, from which the package and machine take their trade name.

The distinctive shape is achieved as the package is produced and filled in one continuous machine operation. The pre-printed paper material—much like conventional paper milk-container stock except that it is coated with polyethylene on one side—unwinds from a reel and is formed by a longitudinal heat seal into a vertical tube.

As it travels downward, this tube is kept constantly filled with product. Sets of crimping jaws, moving continuously at the same speed, pinch the tube together at exact intervals, squeezing product from the compressed area and effecting a heat seal. The fact that these seals are alternately made at right angles to each other accounts for the tetrahedron shape of the container. This machine is unique in that the seal is made right through the product; in other continuous package makers the product enters each package unit only after a bottom seal has been made.

Cutters separate the chain of tetrahedrons into individual units, which are discharged automatically from the machine. The result is a continuous flow of ready-to-sell packaged products.

Although Safeway has given no figures on its own cost, containers formed and filled by this method, according to the machinery manufacturer, generally represent savings of 40 to 50% per unit over comparable methods of packaging liquids in paper.

The paper is a bleached stock, dry waxed on the outside, to give water repellency, and with poly-



'It's fun' theme in store mobiles dramatizes unusual shape of the tetrahedral ice-cream package by associating it with the product's festive trade name, "Party Pride," and happy figures of clowns.

ethylene on the inside providing a package that is strong, leakproof and tasteless. The high temperature at which the extruded polyethylene coating is applied helps to make the package sanitary.

In Sweden, paper used initially for milk containers was coated inside with vinyl. While vinyl is satisfactory as a coating, it is the polyethylene coating, perfected after several years of development work, that is responsible for extending the use of the package to new product fields in this country, as it is less costly and easier to heat seal.

The machine at Regal is turning out 3½-oz. packages for three flavors of ice cream—chocolate, vanilla and strawberry. The soft, partially frozen ice cream is fed into the machine by overhead pipes. Completed packages are discharged into metal baskets for transfer to the sharp-freeze room.

After freezing, the fin seal along one edge of the tetrahedron is perforated for easy opening. Printed copy calls attention to the perforation and instructs the user to tear the edge completely off, then simply squeeze the ice cream out through the open side. The ice cream thus can be eaten directly from the package, or it may be up-ended and deposited on a plate or cake, retaining its interesting shape.

The complete edge perforation was developed especially for ice cream. When the container is used for milk, cream or juice, it is opened by simply cutting off any corner with a scissors or special



Jumble arrangement in Safeway's frozen-food cabinets lends display interest, is effective merchandising method that creates no stacking problem.



Multiple purchases are stimulated at Safeway by sealing units of six or more of the individual packages in transparent polyethylene bags.

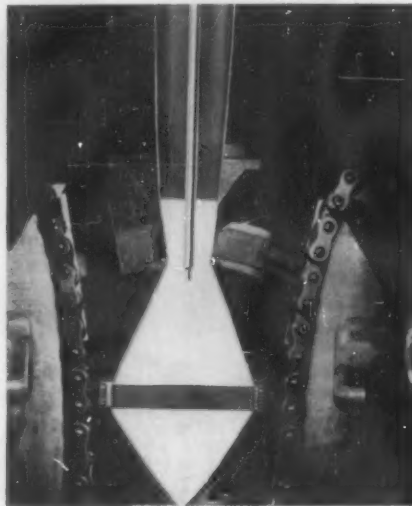
Compact machine makes and fills



Single roll of the pre-printed and coated paper is fed into the machine.

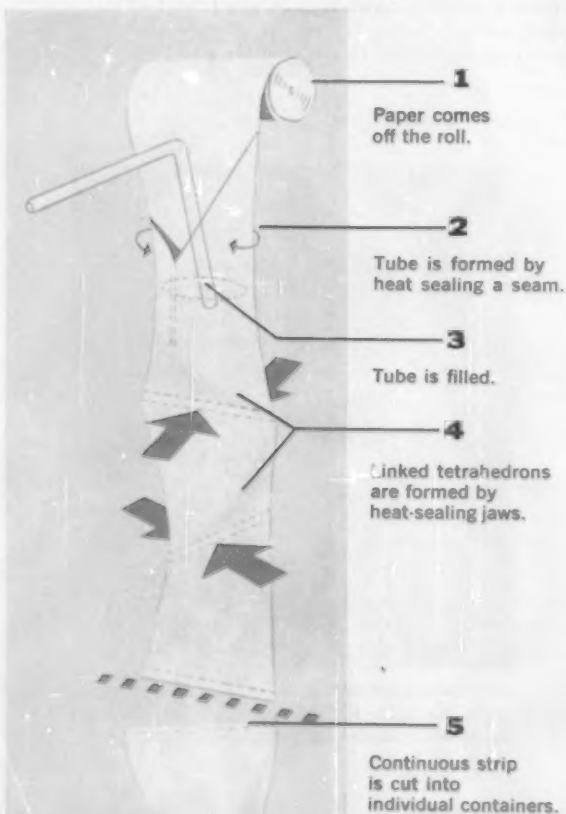


Vertical tube is formed by longitudinal heat-sealing unit as the roll of paper stock unwinds.



Soft ice cream is fed into the machine from above to filling pipe. The product never comes in contact with outer surface of the package.

Five steps in process:



opening device, providing a small pour opening.

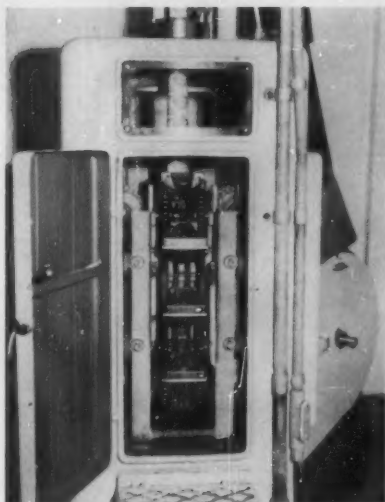
A marketing question in connection with this type of package has been the difficulty of fitting the oddly shaped packages together into a compact delivery and display unit. A pattern for arranging the packages into a hexagonal delivery container has been devised and attachments to do this packing automatically are available. Safeway elected, however, simply to pack, deliver and display the small packages in jumble style. The jumble display in one bin of the frozen-foods or ice-cream case seems to catch the shopper's interest.

Safeway, of course, encourages multiple-unit sales. At first, a triangular-section paperboard multipack holding six packages was used. Later this was abandoned in favor of plain polyethylene bags in which six packages could be place packed. This is an economical method which appears to have greater consumer appeal.

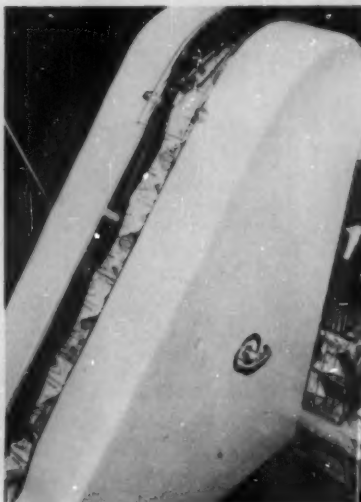
Safeway is not yet ready to draw conclusions as to the performance and acceptance of the package in its pioneering application to ice cream. But reports from market observers at Seattle stores where the package has been introduced indicate continuing enthusiastic consumer response over a period of some three months. This may be credited in part to Safeway's smart promotion in introducing it.

Aware that the curious shape of the package, and

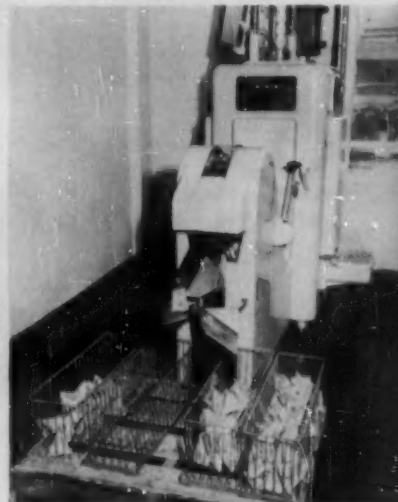
packages in one continuous operation



Heat-seal jaws traveling on continuous chain make alternate transverse seals at right angles to each other, pull tube through machine.



Continuous strip of filled containers is cut apart as the containers move up and over for discharge.



Automatic counter controls two discharge spouts which shift from one chute to other at count of 10, 25 or 50.

the unusual opening and dispensing technique, might create resistance rather than interest, Safeway has neatly turned the disadvantage to an advantage by playing heavily on the idea that "It's fun!"

The product carries the brand name "Party Pride," with point-of-sale display copy reading: "Now try Party Pride Ice Cream in the Tetra Pak. It's fun!" Television, radio and newspaper advertising features the package as "easy to handle for desserts, sundaes, floats or to eat from the carton." The Party Pride packages are gaily printed in three colors—yellow, red and brown.

The figure of a clown used in the promotion conveys a festive association with the product. During the introductory period, store demonstrators have been used, dressed in clown costumes, while clown mobiles, posters, hang-ups of dummy cartons and give-away leaflets stress the "New shape in ice cream." Photographs of dessert suggestions showing decorative uses for the new shape were made available for newspaper food columns and for flip cards in television advertising.

Bright prospects for this type of package are indicated by the fact that the Swedish company which manufactures the machines and leases them to the user of the package has set up an American corporation with two sales offices and has licensed four leading U. S. converters and paper companies to

produce the special paper. According to the machine licensee, orders for 25 U. S. machines already have been booked. Machines reportedly are available to handle sizes from $\frac{1}{2}$ oz. to 8 oz. There is a royalty charge based on the number of packages processed.

Supplies and services: "Tetra Pak" machine leased by the Tetra Pak Co., Inc., 155 Washington St., Newark, N. J., and Ferry Bldg., San Francisco. Polyethylene-coated paper for Regal ice-cream packages supplied by Crown Zellerbach Corp., 343 Sansome St., San Francisco.

Happy consumer slides ice cream out of opened container clean as a whistle due to characteristics of inside polyethylene coating on paper.



OWENS-ILLINOIS ASSURES YOU A COMPLETE PACKAGING APPROACH



Co-ordinated Research

Pure research into fabrication of glass, packaging research into processing and handling methods in customer plants, market research into consumer attitudes. All add up to greater packaging value.



Engineered Design

At Owens-Illinois, your package's *three* needs are taken into account: 1) Considerations of its function in the retail store, 2) its operating efficiency, and 3) its consumer utility.



The Right Container

Versatility of facilities and talents make O-I your best source of supply. In container development—beauty, utility, tradition are blended in the right proportions for your product's needs.



The Right Closure

Through long and continuing research O-I has developed the most advanced metal and plastic closures. Helping you choose the right closure is another function of O-I's packaging service.



Needed Fitments

O-I specialists are keenly aware of sales benefits derived from plastic shaker and pour-out fitments which are not "gadgets" but which increase consumer satisfaction with your product.



Merchandising Cartons

Modern cartons are developed only through systematic consideration of their opportunity to serve you in the retail store and warehouse... as well as on your own filling line and in transit.





Metalized closures are another part of O-I's complete packaging service

Give your salespackage this *TOUCH OF GOLD* ...an O-I metalized closure!

To your customers, a salespackage capped with golden color signifies a *special* product.

That's why a metalized closure—as part of a well-designed package—is a sure way to draw attention to your product... to express its quality... to compel sales action.

With all their sales value, metalized closures are but one part of Owens-Illinois' complete pack-

aging service. This service includes virtually every type of metal or plastic closure... complete selection of stock containers as well as custom designs... label designs... special fitments... merchandising cartons.

Ask your Owens-Illinois representative for complete details on metalized closures or any part of O-I's packaging service. Call him today!

METAL AND PLASTIC CLOSURES
AN **O** PRODUCT

OWENS-ILLINOIS
GENERAL OFFICES • TOLEDO 1, OHIO

Checkerboard bras

The trend toward more elegance in displays to match store decors is revealed by new metal units for packages containing Good News strapless brassieres, made by the Warner Bros. Co., Bridgeport, Conn. Several new counter and floor display units made of light sheet metal in black, gold and white colors trimmed with brass are designed to present the high-styled folding boxes in checkerboard arrangements. Contrary to the usual practice in the field, Warner markets its products solely in packages rather than selling partly in bulk. The carton employed has a photographic reproduction of the back view of the garment printed by letterpress on a black background on one side and a front view against a white background on the opposite side. Size and model information are printed on all four sides in gold-colored ink. The new counter unit, also available with a floor stand, holds 32 of these boxes, eight on each side. A smaller unit holds 18 packages.

Supplies and services: Display units by Newhart Products, Devon, Conn. Cartons by The Warner Bros. Co., Box Div., 325 Lafayette St., Bridgeport 1, Conn.



Display Gallery

Doll stage setting

A novel platform that protects the new Dollikin flexible doll in its shipping carton also provides a life-like display setting for this debonair creation by Uneeda Doll Co., Inc., Brooklyn. The feature of this doll is its flexibility to duplicate almost any position of the human figure. Seated with its legs crossed on a raised section at one end of the platform, the doll is held securely in this natural position by white wire bands. Illustrations and copy explaining the doll's unusual maneuverability and suggesting play uses are printed on the back of the platform and on a side wing that folds forward to protect the doll while it is in the carton. The platform alone serves as a complete display unit for the doll. In addition, the interior of the shipping carton is colored black so that it can be used as a shadow box to display the doll on its platform by simply removing the cover and folding out the side wing.

Supplies and services: Platform and carton by Continental Can Co., Inc., Gair Boxboard & Folding Carton Div., 100 E. 42 St., New York 17.



Paste pusher

A corrugated shipping carton converts in a jiffy into a compact and attractive counter-display unit for squeeze tubes of Firma-Grip white paste, made by Binney & Smith, Inc., New York.

The new display shipper holds two dozen 2¾-oz. polyethylene plastic tubes and takes only 8½ in. of counter space. It is constructed of corrugated board made with white kraft liners. Sales copy in clean-looking block letters and blue and red inks is printed on the interior flap surfaces. When the carton is opened, one end flap folds back to serve as a riser. The other end flap has two scores to fold forward and under the carton, forming a 2-in.-deep front panel and a display base. The side flaps bend back and are die cut to support the carton at an angle steep enough to provide vertical display without dislodging the tubes. Folded white corrugated inserts divide the container into four equal sections to hold the tubes in position.

Supplies and services: Display shipper by Liberty Corrugated Container Corp., 47-40 Metropolitan Ave., Brooklyn 37. Polyethylene tubes by Bradley Container Corp., Maynard, Mass.



Display Gallery

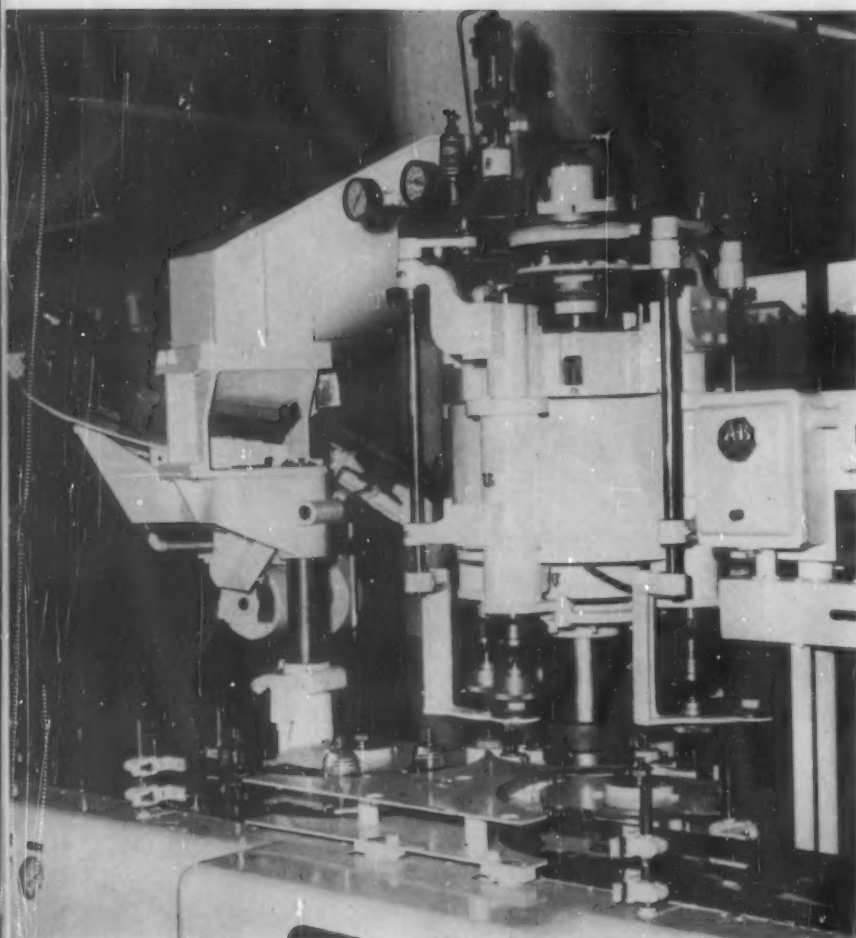
No-space riser

Effective display without waste of counter space is achieved by a new wire riser with dangles adopted for Hush cream deodorant, made by the Toni Co., a Div. of The Gillette Co., Chicago. Base of the space-saving unit is a 4-in. square of laminated board with a pocket in one edge and an adhesive pad on the under side that holds it to a counter, shelf or even the top of a cash register. The bent end of the 20-in. wire riser is inserted into the pocket of the anchored base pad. The riser supports a colorfully lithographed illustration designed to catch attention and show the brand name. Suspended by cords from each end of the top piece, diamond-shaped cards with sales messages printed in contrasting colors dangle like parts of a mobile. This display unit is said to be an adaptation of similar but larger wire riser displays for gondola tops in supermarkets. Space saving is its main function. Druggists may use it as a focal point for mass merchandise displays of the product.

Supplies and services: Riser by Einson-Freeman Co., Inc., Starr & Borden Aves., Long Island City 1, N.Y.

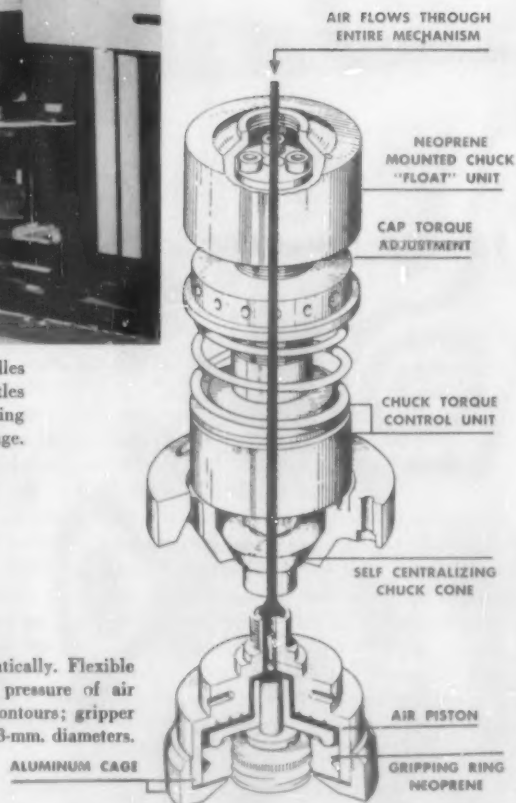


Approach to a



Rotary capper with new pneumatic chuck principle handles round, straight and tapered closures for 2-, 4-, 6- and 7-oz. bottles at Avon Products with only minor adjustment of its four capping heads. Speeds are 120 or more a minute with almost no breakage.

Principle of pneumatic chuck shown diagrammatically. Flexible Neoprene ring at capping head expands under pressure of air piston to grip cap gently but firmly, despite odd contours; gripper rings are quickly changeable to accommodate 14-33-mm. diameters.



universal capper

*Pneumatic chuck adopted by Avon meets the need
of cosmetics industry for quick adaptability to widely varying
shapes and sizes of molded closures*

The ceaseless search for variety and individuality in cosmetics packaging has led to a diversity of shapes and sizes of molded closures for bottled products that has long been the despair of production-line engineers. Few lines in this field run continuously on a single product and down time for change-over, where different closures are involved, can be a costly item.

An answer to this problem has been found at the Suffern, N. Y., plant of Avon Products, Inc., with a machine which may be the nearest approach yet to a universal capper. The machine is remarkable not only for its quick adaptability to closures of varying sizes and contours, but for the trouble-free delicacy with which it handles them.

The four-head rotary capper used by Avon applies closures at speeds up to 120 or more per minute. Molded plastic or metal caps up to 33 mm. in diameter can be handled. When equipped with a larger automatic cap feeder, the machine can handle closures up to 89 mm. in diameter.

The automatic feeding device is designed to handle caps so gently that jams and breakage are almost completely eliminated. Caps are picked up only when there is a container in the slot, so there is no need for a basket to catch unused caps. The pneumatic chuck is fitted with a doughnut-shaped ring of Neoprene that is expanded by a compressed-air piston to grasp the cap securely but gently as it is turned onto the container.

Avon has found that this machine reduces down time caused by broken caps or dropped liners; eliminates loss of caps and waste due to soiling of dropped caps; provides easier control of cap supply, and requires little cleaning because caps are not continually churning in the feeder to create dust.

The capper at Avon is synchronized in a packaging line that includes a bottle blow-cleaner, a liquid filling machine, a labeler and a cartoner. Filled bottles are spaced about 5 in. apart to avoid jamming travel on the conveyor to the capping machine where a star wheel inserts them into grippers for the trip around the capper. In event a jam



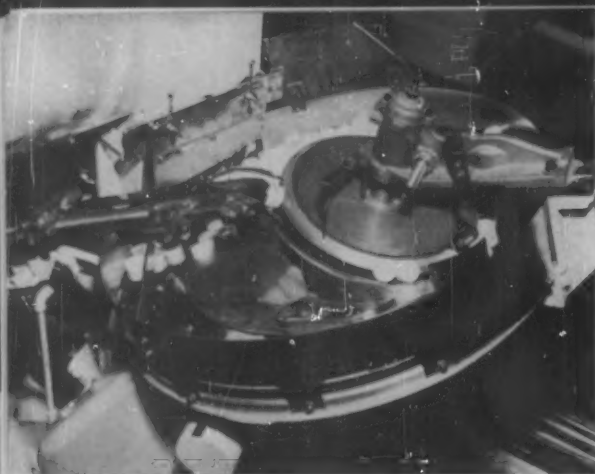
All these shapes and sizes are handled by the single capping machine at Avon Products.

occurs at the star wheel, the machine stops itself.

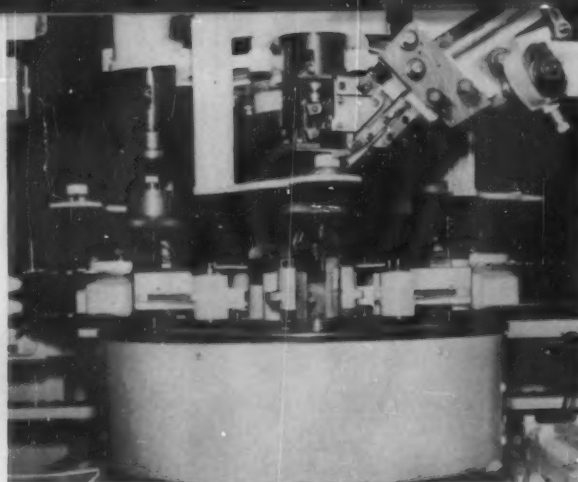
From an elevated hopper at the side of the machine, caps slowly pass into the feeder pan, which turns only a fraction of a revolution each time the machine calls for more caps. This eliminates wear and tear on caps—especially those molded of plastic with knurled sides or projecting fins—which often results from churning in a revolving feeder pan.

Part way down the chute from the feeder to the capper, a pneumatic limit switch is tripped as the last cap in the chute passes over it. This actuates the feeder pan to revolve just far enough to push some caps onto the feeder wheel which carries them to the head of the chute. Each cap is flipped top-side up as it enters the chute. Several different sizes of caps can be run in this feeder system without changing settings or parts.

As a pick-up plate passes under the end of the feed chute, a cap drops onto its center button and is pushed against the plate to set it up straight. A



Looking down into cap feeder pan, which is actuated by the last cap in feed chute to turn just enough to put a small batch of caps on wheel for trip to chute head, where each cap is flipped top side up. Breakage and dust are minimized.



Controlled feed to the capping head eliminates the need for a basket to catch dropped caps. There is a no-container, no-cap control.

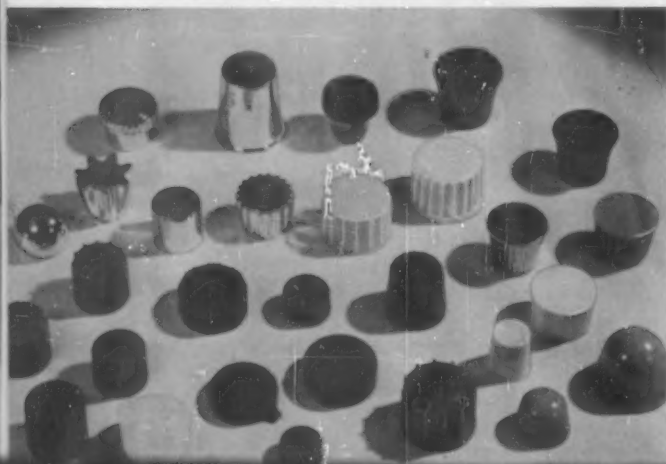
chuck then descends over the cap and the air piston expands the Neoprene ring inward to grasp the surface of the cap. Moving around, the chuck lifts the cap from the pick-up plate and sets it on a bottle being picked out of the star wheel by a gripper.

While the container travels about half way around the machine, the revolving chuck screws on the cap to the desired tightness. Here a pre-set clutch slips and pressure on the gripper ring is released so the chuck can lift off as the capped bottle goes into another star wheel for transfer to the conveyor.

Complete change-over of the pneumatic-chuck capper takes one man 45 min. to an hour. Star wheels and bottle grippers may have to be changed and chuck height adjusted for a different container.

However, the air chuck itself is easily adapted for a new cap size. An aluminum "cage" at the bottom of the chuck unscrews to permit insertion of a gripper ring with a larger or smaller aperture.

Wide range of the machine is indicated by this selection of different types of closures, all of which could be handled on Avon Product's capper.



The machine is made with one to four chuck speeds to match partial turn-on lug-type caps to multi-turn long continuous threads. For some caps, the feeder wheel and chute may have to be adjusted also.

Caps ranging from 14 to 33 mm. in diameter can be applied with the machine at Avon's Suffern plant by simply changing gripper rings and adjusting the feed chute. So far, it has been used chiefly for 15-, 18-, 20- and 24-mm. caps molded of urea plastic in various heights and with straight or inverted-taper sides that are knurled for easy opening. A smooth, spherical cap molded of plastic in two sizes gives an unusually distinctive touch to a special line of bottles used for the packaging of women's toiletries.

The ability of the pneumatic capper to accommodate closures of so many different sizes and shapes has proved so advantageous that Avon is installing additional machines in its new plant in the Chicago area. The machine is available with two, four, six or eight capping heads, depending upon the speed desired.

Supplies and services: Air chuck capping machine by Pneumatic Scale Corp., Ltd., 65 Newport Ave., North Quincy 71, Mass. Avon men's deodorant and cologne caps by Mack Molding Co., Ryerson Ave., Wayne, N. J., and Owens-Illinois Glass Co., P. O. Box 1035, Toledo 1, Ohio; bottles by Carr-Lowrey Glass Co., 2201 Kroman St., Baltimore 30, Md. Astringent caps by the Wheeling Stamping Co., 2116 Water St., Wheeling, W. Va.; bottles by Owens-Illinois. After-shave lotion caps by Mack Molding and Owens-Illinois; bottles by Owens-Illinois. Antiseptic caps and bottles by Owens-Illinois. Hair-lotion caps by Mack Molding and Owens-Illinois; bottles by Diamond Glass Co., First Ave., Royersford, Pa. Toilet-water caps by Formold Plastics, Inc., Box 103, Blue Island, Ill.; bottles by Carr-Lowrey. Cologne caps by Formold; bottles by T. C. Wheaton Co., Millville, N. J.



Typical reactions



to BURT packages



PICTURE CANS FOR BEER



*Meister Brau goes all out,
with wrap-around illustrations
in six-color lithography from photo copy
suggesting 10 different happy occasions
for drinking beer*

The ancient art of decorating beer mugs with festive scenes is being put into modern dress this summer by Chicago's Peter Hand brewery for its Meister Brau beer. Instead of ceramic bas-relief figures frolicking on heavy steins, Meister Brau is using six-color lithography on cans to reproduce full-color photos of 10 different "happy days" illustrations.

Meister Brau may be the first brewery to cover an entire high-production can with fine-register halftones, all 10 reproduced without black. On the packaging line the bright new cans offer no more problems than a single-design, run-of-the-mill can, the company says.

Cost for the "wrap-around photo" can is admittedly higher than for the typical, line-illustrated three- or four-color beer can. However, the company expects the new packages will strengthen Meister Brau's position in its six-state marketing area that has an estimated 130 competitors. And, Meister Brau is paying little more than it has been paying. The "happy days" theme is merely the latest in a series of colorful designs that began in 1952.

The Meister Brau concept of packaging reflects its strong faith in cans as a merchandising medium for beer. Five years ago it came out with its original "Fiesta Pack," which consisted of six different multicolor designs. The Fiesta cans were an immediate success and the company saw its beer sales climb.

The designs were changed from time to time, growing more complex in color treatment and illustrations. The latest design, prior to the photo treatment, was an abstract design printed in a total of nine colors in various combinations.

Throughout all of this changing design program the Meister Brau identity has been maintained by its strong logotype and by the fact that its cans have varying, brightly colorful patterns.

If motivational research theories are correct, Meister Brau feels, its new cans are planned prop-

erly. Every product, according to this thinking, has or can have an image of its own.

Beer is associated with pleasant times and happy occasions. Meister Brau's "happy days" cans reflect a package of pleasure inside and out, with each can an ad in itself. The cans tie in closely with the current advertising campaign, "Meister Brau, your most delicious toast to happy days!"

The 10 designs show different couples engaged in as many different recreational activities that range from a moonlight hot-dog roast to a snow-laden ski scene. The pretty girls have obvious attraction and the young and vital couples have special appeal to the rapidly increasing younger beer market.

Though they have been introduced this summer, Meister Brau expects to use the cans the year round. For that reason all seasons and many avocations are depicted on the new cans. The brewery believes that, among the photos it has selected, it hits at least one favorite activity of nearly everyone.

The entire program was planned and completed in three months.

Reproduction of color photos of this nature on cans presented a few technical problems which had to be solved before final artwork was prepared by Meister Brau's ad agency. Use of background color was important for proper printing and two proposed blues were resolved to a single shade of blue. Fine registration and proper color overlay are printing-control details that must be carefully watched.

Six colors are used: red, yellow, blue, white, brown and gold. Elimination of black does not hinder the rendering of fine details in the illustrations. Twenty can bodies are lithographed to a sheet, making two sets of the 10 designs. These are collated and made into cans in an alternate sequence to insure a variety of designs when cases of empties are delivered to the brewery.

The six-pack cartons are printed on a six-color gravure press, running red, yellow, blue, brown,

All the way around run these full-color, photographic, fine-screen reproductions of happy, healthy young people golfing, sailing, racing, fishing, bowling and generally having fun. Ten different scenes, appropriate to all seasons, are collated in packing for variety in display and purchases. Labeling is confined to the single, small, overlaid panel.





Forerunners of the photographic series were these designed illustrations, which launched the company's current "happy days" theme.

Can body flats show 10 different lithographed scenes in full. Note how scenes are integrated with the strong new Meister Brau logotype.

gold and varnish. Three different cartons are used, each running two "happy days" scenes that are alternately summer and winter pictures. The six-packs use the same artwork as the cans, thus backing up and promoting the new can designs. Gravure printing on white paperboard stock had to match the lithographed cans.

This month 12-pack cartons will go on sale also, drawing from the same artwork for illustrations on four sides of the carrier.

On its production line Meister Brau has no problems at all.

Empty cans are dumped into the line at random as they are received from the manufacturer. The brewery receives 48 cans to a case. Since these originally were collated and made in sequence of 10 alternate designs, there is little chance that all six cans in the carton will be the same. Though a half-dozen duplicates are theoretically possible, the company has found that most six-pack cartons carry no two cans alike. Random overpacking into the six-pack cartons is the rule Meister Brau follows. Be-

cause the carton flats are delivered in a succession of three designs, the company is assured of good variety at the retail outlet.

What will the new cans do for Meister Brau? For one thing, says a company spokesman, the anticipated increase in sales will more than cover the higher costs for halftone plates and six-color printing. Already Meister Brau's can sales carry a much greater proportion of its total sales than is typical of the industry. The new cans, the company feels, may open the door to the few remaining outlets in its major sales area not now carrying Meister Brau. It will continue the merchandising push Meister Brau has given its beer can. And it incorporates and helps spread the new Peter Hand shield which the company has adopted for all of its products.

Supplies and services: Lithographed cans by American Can Co., 100 Park Ave., New York 17. Six-pack cartons by Continental Can Co., Inc., Gair Box-board & Folding Carton Div., 530 Fifth Ave., New York 36. "Mor-can-pak" cartoner by Morris Paper Mills, S. Dearborn St., Chicago 3.



*How 3 types of packaging with
BAKELITE Brand Plastics
can work*

to sell your product

1. Polyethylene coating

The layer of BAKELITE Brand Polyethylene on the inner side of this paper-foil laminate pouch keeps the contents safe, saleable, and fresh. Powdered soda pop must stay dry—it fizzes when it touches water, loses its fizz if it gets damp. The polyethylene coating provides a tight heat-seal and protects the flavor of the drink. Result: better taste, bigger sales, and a successful packaging idea that is ideal for scores of powdered foods, drugs, and chemicals.

(continued on next page)



There's still time to make your Christmas package of BAKELITE Plastics

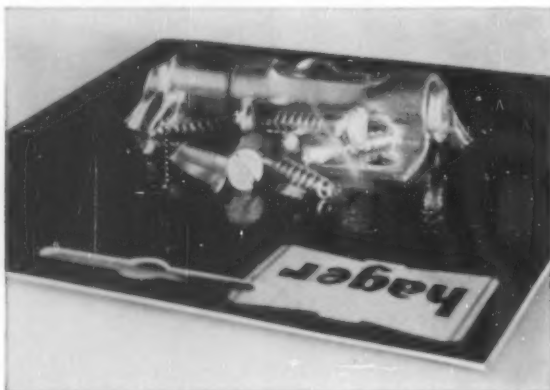


to sell your product continued from preceding page

2. Sturdy "skin packaging" builds self-service sales

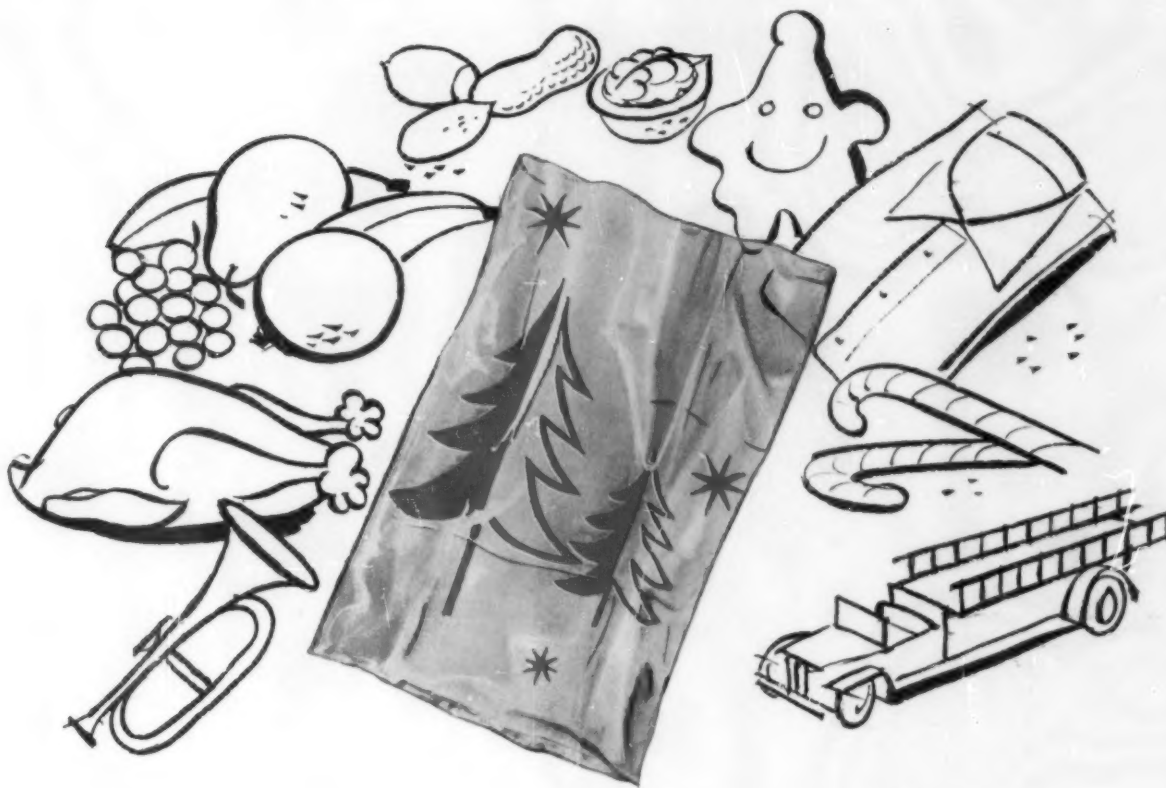


Hardware shoppers can see the advantages of "skin packaging" with KRENE Cast Vinyl Film. They know all the parts are there. They can tell the product is factory fresh. Instructions on the mounting show through clear and clean. The strong, glossy film fits tightly around the product and mounting, protecting against moisture, air, and dirt. Retailers like it, too. It simplifies their inventory and makes self-service selling easy.



There's still time to make your Christmas package of BAKELITE Plastics





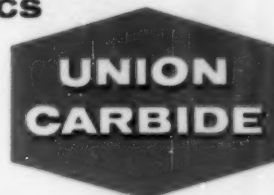
3. Polyethylene bags offer Christmas sales appeal all year 'round

Bags like this—made from BAKELITE Brand Polyethylene—add extra sales appeal at Christmas and all year 'round. Customers love them because they simplify selection and carrying, and they appreciate their reusability. Their transparency enhances the quality of the merchandise and encourages self-service sales. They keep products clean and safe from handling. Polyethylene film packages come in a variety of shapes and sizes. Attractive printing heightens their selling power, even after the bags have left the store and reached the home . . . where customers reuse them again and again.

For more ideas on how you can profit by packaging with BAKELITE Brand Plastics, write Dept. ZG-105 and ask for a copy of our "Guide to Improved Packaging."

ASK YOUR PACKAGING SUPPLIER ABOUT

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BRAND
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BAKELITE COMPANY, Division of Union Carbide Corporation, 30 East 42nd Street, New York 17, N. Y.

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There's still time to make your Christmas package of BAKELITE Plastics



Clear Sailing Ahead in Bleached Sulphate Board!

**The trial runs are over!
The race is won!**

Employing only virgin pulp, an unique bleach plant, a new paper machine and an inspired technical staff, we now produce highest purity, highest quality bleached sulphate board with surface designed for improved roto, litho or letterpress printing. All types of bleached board, including food container stock and liner board, are manufactured in our completely integrated plant at St. Marys, Ga.

Your inquiries are invited.



Gilman Paper Company

630 FIFTH AVE., NEW YORK 20, N. Y.; DAILY NEWS BLDG., CHICAGO 6, ILL.



End flaps of display shipper have printed address forms and labels identifying four models. This speeds packing corrugated-wrapped mixer unit and pre-boxed accessories from suppliers.

By designing its own display-shipper carton and buying accessories pre-packaged in boxes instead of in bulk, The Powers Regulator Co., Skokie, Ill., has cut shipping time 51% for its Hydroguard thermostatic shower water control.

The new package provides better protection and display in transit and on dealers' shelves, and more than compensates for its added cost by reducing inventories and saving packing time, according to Earl R. Brown, sales promotion manager, who designed it. Powers' experience provides some valuable packaging ideas for multi-part hard-goods items, especially those shipped with accessories from outside suppliers.

Vendor accessories formerly arrived at Powers' assembly department in barrels. Each accessory was wrapped in kraft paper, sealed with gummed tape, hand stamped with an identifying number, then sent to stock. The assembly department wrapped each Hydroguard mixer in a corrugated liner, placed it in a lightweight corrugated storage carton, sealed it with gummed tape, pasted on an identification label and delivered this carton to stock.

To fill orders, the accessory package and mixer carton were sent from stock to the shipping department, where they were packed with excelsior in whatever shipping carton was handy and labeled with a typewritten slip.

Packing and shipping 300 units took more than 30½ hrs. by this complex method. With the new package, it takes only 15 hrs.

Vendor accessories now arrive individually packed in chipboard boxes bearing identifying numbers. In the assembly department, the mixer is placed in a corrugated sleeve and loaded with accessory boxes and corrugated space inserts into

Pre-packed accessories

Thermostatic shower control units are packaged twice as fast with parts from outside suppliers already boxed for insertion in Powers Regulator's new display shipper

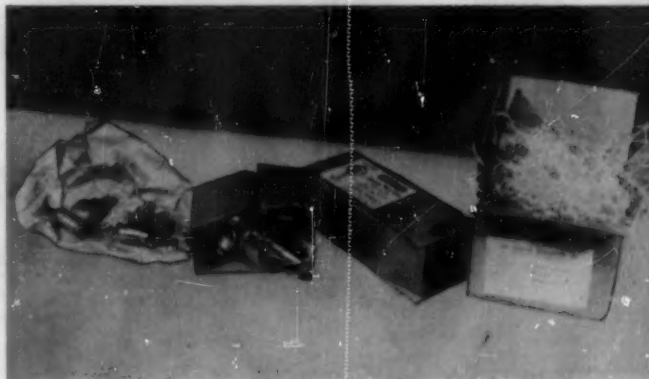
the shipper, which is then stapled shut and sent to finished stock.

Attractively lithographed in brown, black and white with a large brand label on each side, the new shipping carton measures 6 by 6½ by 9 in. Full four-tab closure is provided at each end. At one end, each flap is printed with a picture and legend identifying one of the four different Hydroguard assemblies so that the contents can be denoted by simply exposing the proper flap before stapling. At the other end a shipping label is printed on one flap.

Display value of the new package is said to please plumbing distributors and Powers likes the simplification of operations which it has made possible.

Supplies and services: Corrugated cartons and inserts and chipboard boxes by Irving L. Odman Co., 110 W. Kinzie St., Chicago 10.

Hand operations formerly involved wrapping bulk-supplied vendor accessories in kraft, sealing with gummed tape and stamping for identification; placing mixer unit in slide and carton, and applying label; packing with excelsior in shipping carton and, finally, applying shipping label.



Now a 35 year user of the BEST PROTECTION



**SOCONY MOBIL
specifies
Tri-Sure®
Closures**



Back in 1922, Socony Mobil started to equip its drums with closures made by American Flange & Manufacturing Co. Inc., and when American Flange introduced Tri-Sure® Closures Socony Mobil became a pioneer user of this sure safeguard from leakage, seepage and tampering.

Today, Socony Mobil Oil Company, Inc.—one of the first users of Tri-Sure Closures for drums—now also uses "Tri-Sure" for pails and cans: the *Tri-Sure K-T Can Closure*, which provides two pouring sizes and makes cans easy to re-use; and the *Tri-Sure Reversible Spout Assembly*, which features a reversible spout that is protected inside the pail during stacking for shipment and storage.

Socony Mobil's fine line of famous products—the result of exhaustive research and advanced methods of refining—are an example of *quality products receiving quality protection*. And Tri-Sure's record of performance in protecting Socony Mobil products is a demonstration that can be used profitably by every shipper.

Let the complete line of Tri-Sure Closures safeguard your complete line of products shipped in metal containers. When you order drums, pails, or cans always specify "Tri-Sure Closures".

*The Tri-Sure Trademark is a mark of reliability backed by over 35 years serving industry. †"Tab-Seal" is a registered trademark of American Flange & Manufacturing Co. Inc.

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Van Leer Industries, Ltd., Seymour House, 17 Waterloo Place, Pall Mall S. W. 1, London, England

A new repellent sizing

Fluorochemical compound shows remarkable resistance to penetration of paper by both oil and water, suggesting new approaches to greaseproof packaging

*By J. H. Ernlund
and L. J. Hessburg**

A chemical which can be described as a new concept in paper sizing has recently been introduced to the paper industry. Like conventional sizing agents, this new product is a good water repellent; that is, it imparts to paper and paperboard a "duck's-back" effect toward water. Of greater importance to packaging, it adds another dimension to the term "sizing" by imparting repellency to oils, greases and a wide variety of other organic liquids as well.

Designated as FC-805¹, the product is a member of the fluorochemicals family. This truly new class of compounds, characterized by stability, resistance to oil, water and chemicals, and unusual surface activity, is becoming increasingly useful to industry in the development of new products and processes.

The traditional method of developing water resistance in paper and board is through the addition of substances like rosin or wax emulsions during manufacture on the paper machine. In contrast to this chemical approach, grease resistance has heretofore been achieved through the use of continuous films, which effect a physical barrier to the passage of oily liquids. This is accomplished practically by off-machine paper conversions involving plastic coatings or laminations with plastic films, specially refined papers called "greaseproof" or foil. Such combinations, although readily "wet" by oil, are resistant to oil penetration.

It is now possible to size against water and oil by

applying the fluorochemical size on the paper machine, using conventional surface-sizing equipment and techniques. By making the individual fibres of the sheet oil repellent, the size adds grease resistance to the other desirable properties of, for example, a kraft sheet, without any sacrifice in properties like porosity, strength or flexibility.

Figure 1 illustrates the behavior of oil and water on paper treated with this new fluorochemical size;

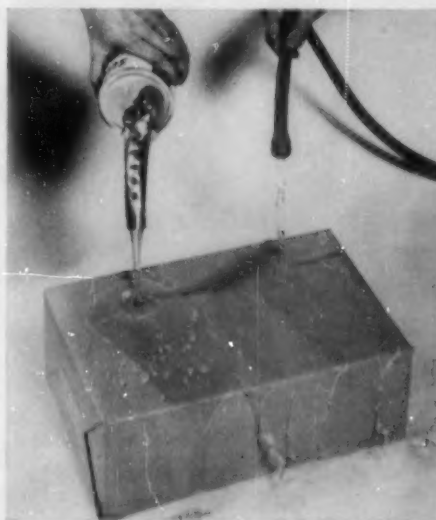


Figure 1. Behavior of motor oil and water on kraft paper treated with new fluorochemical size.

*The authors are with the Fluorochemicals Div., Minnesota Mining & Mfg. Co., St. Paul, Minn.

¹Fluorochemical FC-805 is marketed under the registered trade name of "Scotchgard" brand grease- and oil-repellent size.

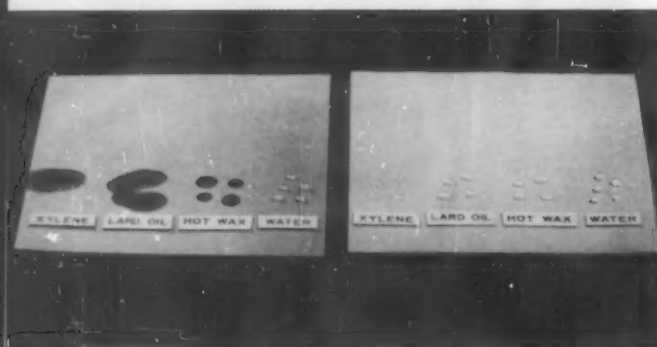


Figure 2. Water and various organic liquids on rosin-sized kraft paper (left) and on fluorochemical-sized paper (right).

neither liquid spreads across the paper, but rather, both tend to "bead up" on the surface.

The treatment is accomplished on the paper machine by soaking at least the surface of the sheet with a dilute aqueous solution of FC-805. Subsequent drying converts the product to a water-insoluble, oil- and water-repellent form. Application may be made at the size press or calender stack, or on many types of conventional coating equipment.

Generally speaking, the treatment is most effective on kraft, is adversely affected by rosin and other

sizing agents, and can be influenced to a significant degree by other papermaking operations. A more complete discussion of the effect of papermaking variables may be found elsewhere (1, 2)².

The level of performance desired can be achieved simply by varying the amount of size deposited in the sheet. The selection of a proper treatment level depends on a number of factors: basis weight, method of application, type of paper, product packaged, etc. Very low treatment levels, of the order of 0.05 to 0.2% of the weight of the sheet, are sufficient to provide excellent "hold-out" of organic liquids as, for example, in preventing the penetration of molten wax during a converting operation. Somewhat higher treatments, around 0.5 wt. %, are required to obtain good, long-term oil resistance.

As a "rule of thumb" guide to the economics of treatment, each 0.1 wt. % FC-805 is approximately equivalent to a chemical add-on cost of 1 cent per pound of paper or board. For example, a treatment of 0.25 wt. % represents a chemical cost of roughly 2.5 cents per pound of treated paper.

Oil-resistance tests

That the concept of oil repellency is new and unfamiliar is evident from the lack of any test method designed to evaluate this property in terms of real packaging situations. The tendency of a surface to resist wetting can, of course, be determined quantitatively through contact angle measurements. As indicated by Figure 2, paper treated with the fluorochemical exhibits contact angles of from 75 to 95 deg. to many oils and hot melts, while for water the value is around 100 deg. For comparison, a sheet of rosin-sized paper, which exhibits zero contact angles to the organic liquids, is also shown. This feature of oil repellency suggests that problems of grease "crawl" or wicking can be minimized.

In many packaging applications, however, what is desired is resistance to grease penetration through a wrapper, bag or carton wall. The standard test for grease resistance (3) which utilizes turpentine as the penetrant is useful for laboratory screening because of its simplicity and speed. On the other hand, a comparison of turpentine test results with oil resistance indicates that the former are not good criteria of the performance to be expected of the fluorochemical sizing under actual packaging conditions, nor can they be used to compare accurately the grease resistance of treated paper with that of plastic films or greaseproof paper.

Table I represents typical oil-resistance data obtained with treated kraft paper and board. Results obtained with commercial greaseproof are shown for comparison. It is apparent that FC-805 treated

Table I: Comparative turpentine and oil resistance of FC-805 treated kraft and greaseproof paper

Type of paper	Treatment level, wt. %	Condition of sample	Oil resistance, days at 110 deg. F.				
			Turpentine resistance, minutes	Corn oil	Lard oil	Peanut oil	Mineral oil
30# bleached kraft, moderately beaten	0.25	Flat	0	5	4	4	4
30# bleached kraft, lightly beaten	0.5	Creased	1	21+	14	21+	21+
30# bleached kraft, lightly beaten	0.7	Creased	8	21+	21+	21+	21+
30# super greaseproof	—	Flat	60+	10	6	7	4
30# greaseproof	—	Flat	4		about 4 hrs. for all oils		
30# super greaseproof	—	Creased	10		"	"	"

²Numbers in parentheses identify References appended.

paper has substantially better oil resistance than the turpentine values would indicate.

The oil data were obtained using a test designed to bridge the gap between the turpentine test and the determination of true performance which can result only from an evaluation under service conditions. In this test, a 1.5-in.-diameter glass ring is sealed to the test sample with corn syrup and filled to a height of 1 in., with the oil containing a red dye. The samples are placed on bond paper resting on glass plates. Periodically, the under side of the glass plate is examined to determine the oil penetration time. To accelerate the test, samples are maintained at 110 deg. F. in a circulating air oven.

Such tests as described above strongly indicate that oil repellency can be useful in eliminating the wicking or crawling of grease along the paper surface and that it leads to a high degree of resistance to oil penetration as well.

A number of questions remain:

1. What treatment level is needed in a particular instance?
2. How well does a relatively porous sheet (e.g., a long-fibred kraft paper) treated with FC-805 withstand oil under considerable pressure?
3. What is the preferred method of incorporating the treatment in a given package?
4. What practical significance is there in the fact that fluorochemical treatment imparts hold-out to liquids like molten wax, hot asphalt and paper varnishes?

To answer such questions, studies have been made of several types of packages and packaging materials, fabricated to include alternative methods of incorporating an FC-805 treated sheet in each case. The specimens have been tested under conditions as closely approximating use conditions as possible. Although this work could not hope to embrace all possible constructions and applications, it is hoped that the items selected are sufficiently diverse that the results will relate to other methods of packaging.

Asphalt laminates

The most common method of producing waterproof paper is by forming a "sandwich" of two or three plies of kraft paper separated by asphalt. Such constructions, which offer excellent protection against water, can be quite susceptible to a failure known as asphalt "bleed." Contact with heat or oil can cause the asphalt to soften and penetrate the paper, causing serious staining of a wrap or of the article packaged. The objective in this study was to determine the extent to which FC-805 treatment of the kraft paper would eliminate asphalt "bleed."

Test laminates were prepared by combining size-press-treated kraft papers on a laboratory laminator

with 255-260 deg. F. m.p. asphalt. It was discovered that the best results were obtained using a sheet treated on one side only, with the treated side *away* from the asphalt, i.e., with the treated surface on the outside of the laminate. Although the papers used were lightly refined kraft sheets of open formation, treatment levels of 0.1-0.2 wt. % gave excellent resistance to asphalt penetration. Laminating was done at 300 deg. F. The results of testing asphalt laminates at high temperature and against oil are shown in Table II.

The excellent resistance to both heat and oil attack prompted an additional test in which envelopes were fabricated from the 30/30/30 bleached kraft laminate. Filled with oily sand at 300 deg. F., the untreated pouch failed immediately. The treated pouch was maintained at 260 deg. F. for 4 hrs. without any sign of failure, as shown in Figure 3.

Wax-coated paper and board

Another property, somewhat akin to asphalt resistance, imparted to paper and board by the fluorochemical treatment is the ability to hold out molten wax. Proper treatment levels effectively prevent excessive penetration of either paraffin or microcrystalline wax into the sheet, yet permit the formation of smooth, continuous films with good anchorage.

The transparentizing effect of wax on unfilled or clay-filled paper is well known. In applications where this effect is undesirable it is common prac-



Figure 3. Pouches were filled with hot, oily sand at 300 deg. F. Untreated, conventional asphalt laminate failed immediately. The laminate made from fluorochemical-treated paper is shown at left unmarked after 4 hrs. at 260 deg. F.

tice to use TiO_2 , which can preserve waxed opacity to a greater degree than can kaolin clay.

To determine whether the wax "hold-out" of FC-805 might have application, a variety of papers were treated and their opacity measured before and after waxing. In most cases it was possible to achieve 100% retention of unwaxed opacity, although the amount of the fluorochemical necessary varied depending on the type of paper. It was found that the treatment level can be so high as actually to afford too much wax "hold-out," i.e., the sheet becomes so repellent that the wax "balls up" on the surface and refuses to coat smoothly. Adjusting the concentration and sometimes raising the wax temperature remedies this difficulty. The following example is typical of the results obtained in the waxed-paper experiments.

A 35-lb. kraft-sulphite paper, unsized and containing no filler, together with a similar sheet con-

taining 5% TiO_2 pigment as a control, were selected. The unfilled sheet was treated on the side to be waxed at 0.15 wt. %, representing a chemical add-on cost equal to the cost of TiO_2 . All samples were waxed with a 70:30 microcrystalline:paraffin blend at 200 deg. F. Opacity values before and after waxing are shown in Table III. The original opacity of the sheet treated with FC-805 was slightly lower than that of the pigmented control because the former contained no filler. An inexpensive clay could be used to gain a higher initial opacity.

A variety of types of paperboard have also been examined with the objective of eliminating unnecessary wax penetration and the dark discoloration often associated with certain types of waxed board. Some of the boards were treated in the laboratory; others on the calender stack of commercial board machines. Included were patent- and clay-coated news, kraft and jute linerboard, bleached sulphite board, bending chip and manila-lined chip. A one-side surface treatment was used, with the fluorochemical applied to the board face to be waxed. Effective treatments ranged from 0.02 to 0.05 lbs. of sizing per thousand square feet of board. In each case a substantial reduction was found in the amount of wax needed to effect a continuous surface film on the treated sample. In addition, the treated board retained its original color after waxing while the untreated control became much darker.

Polyethylene-coated paper

The combination of polyethylene and paper is an ideal wedding of two splendid flexible packaging materials. Polyethylene contributes many desirable properties—good resistance to grease, water and water-vapor; chemical inertness, heat sealability, etc.—while paper provides a strong, firm, economical base. Much of the utility of polyethylene-coated paper as a barrier material, however, disappears with polyethylene coatings less than about 1 mil. Moreover, at any film thickness there remains the problem of grease absorption by the kraft-paper

Table II: Resistance to asphalt 'bleed'

Heat resistance
Elevated temperature exposures were run in circulating air oven. After laminating, all samples, treated and untreated, were slightly off-white in color since 30-lb. sheet had insufficient opacity to mask the black asphalt.

Paper (30/30/30 laminates)	Treatment level	Temp. deg. F.	Time	Condition of laminates
30# bleached kraft	No treatment	70°	3 weeks	Yellowish brown
30# bleached kraft	No treatment	200°	15 min.	Mottled black
30# bleached kraft	FC-805, 0.15 wt. %	250°	20 hrs.	No change from original

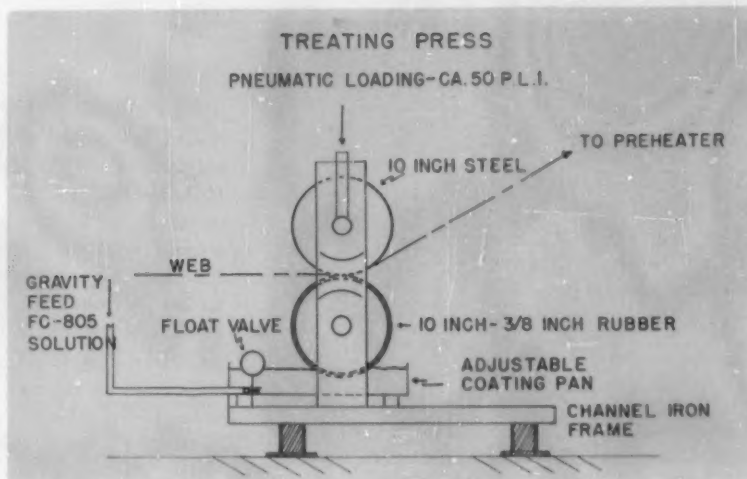
Oil resistance
Oil test used was described earlier. Oil was SAE 30 motor oil at 110 deg. F. Samples were tested flat.

Paper (50/30/50 laminates)	Treatment level	No. of treated plies	Time	Condition of laminates
50# unbleached kraft	No treatment	—	1 day	Black—severe oil and asphalt penetration
50# unbleached kraft	FC-805, 0.2 wt. %	1	30 days	No sign of failure
50# unbleached kraft	FC-805, 0.2 wt. %	2	30 days	No sign of failure

Table III: Comparative effectiveness of FC-805 and TiO_2 in retention of waxed opacity

	Sample No. 1 No filler No FC-805	Sample No. 2. 5% TiO_2 No FC-805	Sample No. 3 No filler 0.15% FC-805
Original opacity	83	87	83
Waxed opacity	37	60	83
% retention	45	69	100

Figure 4. Squeeze-roll set-up used on corrugator for applying FC-805 fluorochemical sizing to either inner or outer liner.



portion of polyethylene coated or laminated constructions. Several tests were conducted to determine whether extrusion of polyethylene onto a kraft sheet treated with FC-805 is feasible and what sort of properties, especially grease resistance, such a product might possess.

The adhesion of polyethylene to an FC-805 treated surface is relatively poor when usual extrusion techniques are employed. However, the polyethylene can be extruded on the untreated surface of a one-side-treated sheet with satisfactory results. The data presented in Table IV shows that the oil resistance of polyethylene-coated paper is substantially improved through use of such a treated sheet. In fact, the oil resistance of a 0.5-mil polyethylene film on a kraft paper treated at 0.25 wt. % actually exceeds that of a 1-mil film on untreated paper. None of the six samples of treated paper tested flat against each oil had shown any sign of failure when the test was terminated after one month. In contrast, many of the untreated controls showed a wide variation in resistance to any given oil with several samples from the six showing pinhole-type failure after only a few days. When the oil penetrated the poly coating on the untreated sample, it immediately wicked through the paper to cause a severe failure.

The treatment level used corresponds to 0.04 lb. of FC-805 per thousand square feet. Many other combinations of fluorochemical treatment and polyethylene thickness are possible, of course, and present data are not sufficient to point out the optimum ratio. Naturally, this may require a consideration of other properties, *e.g.*, vapor resistance, needed in any particular packaging application. It should be remembered in this connection that FC-805 does not affect the vapor resistance of the base paper.

Earlier, it was mentioned that common laboratory oil tests do not adequately measure the effect of

pressure tending to force oil through a packaging paper. It is apparent that a relatively open kraft sheet even though treated with the fluorochemical will not have the same "pressure" resistance as a tight greaseproof paper or a plastic film. Whether the resistance is adequate is best determined under conditions of actual use. Combinations of thin polyethylene films with treated kraft show considerably improved pressure resistance.

Corrugated containers

Corrugated cartons can be made grease or water resistant through lamination of film or special paper to the linerboard before corrugation, by coating corrugated blanks with wax or wax-polyethylene blends, or through the use of free-form liners. The objective here was to determine the degree of resistance which could be achieved using a linerboard made water and grease resistant by FC-805 treatment.

A number of grades of commercial Southern kraft linerboard have been examined. Good water and oil resistance was obtained in all cases, with best results on that board with the lowest amount of size. Although jute generally shows low response to treatment, good results were also obtained on a jute board which had a top liner of reworked kraft. Proper treatment levels depend on the type of performance sought.

Based on laboratory treatment, the following schedule is indicated:

Level of performance	Treatment
Water repellency (complete roll-off)	0.02 ² FC-805/M sq. ft.
Wax hold-out	0.04 ² " "
Low oil resistance (few days)	0.1 ² " "
High oil resistance (weeks)	0.2 ² " "

The treatments indicated are independent of liner basis weight. A treatment level of 0.1 lb. per thou-

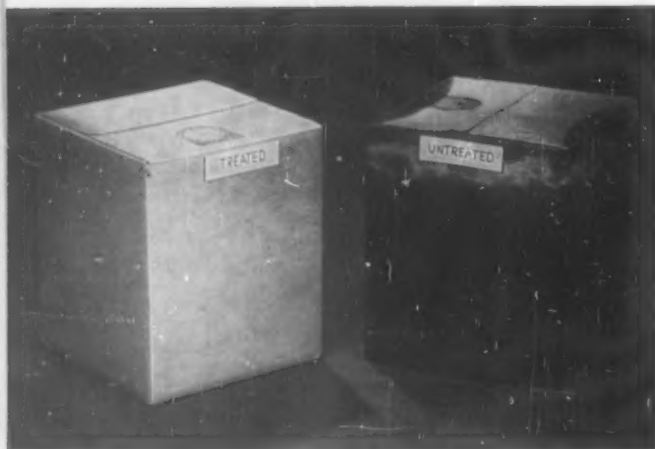


Figure 5. Cartons filled with sweeping compound (9% oil) were tested at 120 deg. F. Untreated carton failed to extent shown in two days. Carton with FC-805 fluorochemical-treated inner liner is shown after one month's exposure.

sand square feet is roughly equivalent to a chemical cost of 80 cents per thousand square feet.

Linerboard can be treated on conventional coating equipment or at the calender stack. In order to facilitate the use of the fluorochemical by the corrugated container manufacturer, a method has been developed by which the treatment can also be applied to either the inner or outer liner on the corrugator machine itself. Application is made using a

Table IV: Oil resistance of extruded polyethylene-coated papers

Paper	Time to failure, days					
	Coconut oil	Corn oil	Cottonseed oil	Lard oil	Peanut oil	SAE 30 motor oil
(All tests at 110°F.)						
Flat						
0.5-mil poly on 50# untreated kraft	4 to 12	1/2 to 29	1/4 to 12	1/2 to 25	4 to 24	1/2 to 24
1-mil poly on 50# untreated kraft	8 to 13	4 to 30+	30+	6 to 29	5 to 30+	13 to 19
0.5 mil poly on 45# kraft treated with FC-805, 0.25 wt. %	30+	30+	30+	30+	30+	30+
Creased						
0.5-mil poly on 50# untreated kraft				1/4 to 2	1/2 to 5	
0.5-mil poly on 45# kraft treated with FC-805, 0.25 wt. %				6 to 8	30+	30+

squeeze roll set-up (like that shown in Figure 4) installed just ahead of the pre-heater at either the single-facer or double-backer station. Using the latter method, a 69-lb. kraft linerboard was treated at 0.2 lb. of FC-805 per thousand square feet on a commercial corrugator. The squeeze rolls had been installed, for convenience, ahead of the double backer. Although the treatment was applied to the unfinished side of the liner for best results, no adhesion or warp problems were encountered.

Samples of combined board from this run were tested in the laboratory with SAE 30 motor oil at 70 deg. F., using the oil test method described earlier. For comparison, samples of wax-coated and protein-coated boards were tested with the same oil. The FC-805 treated samples showed no sign of failure through the combined board after five weeks when scored and eight weeks flat, at which time the tests were terminated. All the other materials had failed within a few hours when tested flat.

Cartons were fabricated from this same treated board and filled with several types of oily products. There was no oil penetration to the outer face after two months in the following tests:

Room temperature (70-75 deg. F.)

1. Carriers grease (m.p. < 100 deg. F.)
2. Elock grease
3. Oily nuts and bolts
4. Sweeping compound (9% oil)

Boiler-room tests (110-120 deg. F.)

1. Sweeping compound

In the case of the sweeping compound shown in Figure 5, and the nuts and bolts, the face of the inner liner was not stained at the conclusion of the test. With the greases, it was impossible to determine whether staining occurred because the inner liner face was coated with the viscous material.

Envelopes

This type of package was investigated partly because of a direct interest in the use of FC-805 in industrial packaging envelopes (e.g., small-parts packages) and partly to provide guidance for a subsequent study of specialty bags and multiwall sacks.

The papers used were 30- and 50-lb. kraft sheets of fairly open formation. Open-end envelopes, approximately 5 by 5 1/2 in., were fabricated from both plain treated and asphalt-laminated papers using a polyvinyl acetate-based adhesive. For comparison, envelopes were also made from a 50-lb. kraft coated with 1 mil of polyethylene.

A fine sand was saturated with SAE 30 motor oil for the test medium since it was sufficiently dense to provide appreciable weight and gave intimate

contact of the oily material with the envelope wall. Each envelope was filled with 300 gms. of the oily sand and suspended by the flap. Results of tests conducted at room temperature and at 110 deg. F. are shown in Table V.

Multiwall bags

A study of multiwall bags made from FC-805 treated 50-lb. kraft paper has been started. Several conclusions can be drawn from the work done to date:

1. The fabrication of standard, sewn-bottom, open-mouth bags on commercial bag-making equipment is straightforward, provided a proper type of adhesive is used.

2. An FC-805 treated paper surface in contact with the oily product is highly resistant to grease "crawl" and wicking.

3. Three-ply sacks containing two plies of kraft paper treated at 0.25 wt. % or one ply at 0.5 wt. % gave better oil resistance than those containing one ply of 30-lb. greaseproof or a 1-mil film of polyethylene on untreated paper. This was true even when considerable pressure was involved.

Additional tests are now under way to determine the optimum placement of treated plies in a multiwall bag, proper treatment levels and the relative merits of one- and two-side treatments.

Printing and gluing

The printability and gluability of an oil- and water-repellent paper or board will be important considerations in the development of a package. Laboratory tests indicate that an FC-805 treated sheet can be glued and printed satisfactorily, although the kind of equipment used, the type of package and the intended application are all significant factors.

A fairly wide range of adhesive types have been found which will adhere FC-805 treated paper. Because of the resistance to wetting imparted by FC-805, some of the water-base starch adhesives do not work well. Other converted starch and dextrin formulations, resin adhesives of the emulsion or latex variety and silicate types have all performed adequately. It is good practice to make a preliminary check of the adhesive normally used before making extended runs on commercial equipment.

The printability has been found to depend greatly on the printing method employed. Experiments on a Vandercook proofpress (letterpress) indicate no serious problems; in fact, on certain "coarse" papers (e.g., on wrapping-grade kraft paper and on liner-board) a slight improvement in printability was noted. Results with rotogravure printing are quite dependent on the nature of the ink vehicle. Since

Table V: Oil resistance of packaging envelopes

Envelope paper	Time to failure, days	
	70 deg. F.	110 deg. F.
50-lb. kraft, untreated, 1-mil poly	2-3	2 hrs.
50-lb. kraft, 0.25 wt. % FC-805, no poly	30+	20-30
50-lb. kraft, 0.5 wt. % FC-805, no poly	30+	20-30
<i>Asphalt laminates</i>		
30/30/30, untreated	4-5	1
30/30/30, 0.25 wt. % FC-805	30+	30+
50/30/50, untreated	2-3	1-2
50/30/50, 0.25 wt. % FC-805	30+	30+

this method relies on the ink receptivity of the paper surface, inks based on solvents which have the greatest ability to wet the FC-805 treated surface give the best results. In this connection, alcohols, esters and ketones are preferred to aromatic solvents like toluol or xylol. Here, again, preliminary testing is advisable.

Summary

A new type of paper chemical, resulting from research on fluorochemicals, has been developed to lay open a new field—the "sizing" of paper against oil, grease and other organic liquids. Fluorochemical FC-805 is an excellent water repellent as well. FC-805 makes possible the manufacture of highly oil- and water-resistant paper and board on the paper machine, thus eliminating in many cases the necessity for off-machine paper conversion. The treatment can also be applied on conventional coating equipment.

Oil tests show that FC-805 treated paper and board possess grease resistance superior to many types of plain greaseproof and glassine papers. High contact angles to oils indicate that an FC-805 treated surface can markedly reduce problems of grease "crawl" and wicking. These tests, however, do not offer sufficient evidence of packaging performance, especially in the case of this different approach to grease resistance. For this reason, a variety of packages and packaging materials made from treated paper or board have been studied.

These packaging tests have shown that FC-805 treated kraft paper can be used to manufacture asphalt laminates which show greatly increased resistance to asphalt "bleed" caused by heat or oil. This suggests several possibilities: asphalt-laminated bags for packaging hot [Continued on page 212]

Nucleonic fill monitor

Radioisotopes are used in England to inspect closed packages for fill level, count and arrangement; speed of line may be as high as 300 a minute

*By E. W. Jones**

In many industries it is difficult to avoid incompletely filled containers, even on a well-designed automatic packaging line. Visual inspection of each package before final sealing is a laborious and costly procedure and in some cases is highly impractical. Check weighing, even if it is otherwise suitable, is often too slow.

A nucleonic package monitor developed in these laboratories "looks through" packages as they pass along the packaging line. It is capable of rapidly distinguishing between packages containing different quantities of goods, even after they have been sealed. It appears, therefore, to meet a real need in the field of automatic packaging.

The principle of the package monitor is extremely simple and can be applied to the packaging of a wide range of goods, including liquid, grain, tablets and almost any other product sold either by volume or by quantity of small pieces or pellets. The packages can take the form of bags, collapsible tubes, cardboard boxes, metal containers, paper packets and envelopes, and many other types. Speed of in-

spection may be as high as 300 packages a minute.

The inspection of each individual package depends on the interruption, by the package, of a stream of beta rays. If a suitable source of these rays is situated on one side of the package as it passes down the packaging line and a detector such as a Geiger counter is placed on the opposite side, the installation may in most cases be so arranged that the proportion of beta rays arriving at the detector is limited by the quantity of material in the package. This is because beta rays are readily arrested by most common materials. A suitable amplifier, used in conjunction with the beta ray detector, can be employed to operate a warning buzzer or light, or to operate a mechanism which automatically ejects the package from the line, or stops the machine whenever a faulty package is encountered.

The standard package monitor consists of the radioactive source, the detector unit, a photoelectric cell and lamp unit, and the amplifier. The source, which generally consists of a radioisotope of cerium, thallium or strontium, is contained in a small, totally enclosed unit which radiates a controlled beam in one direction only. The amount of radiation given

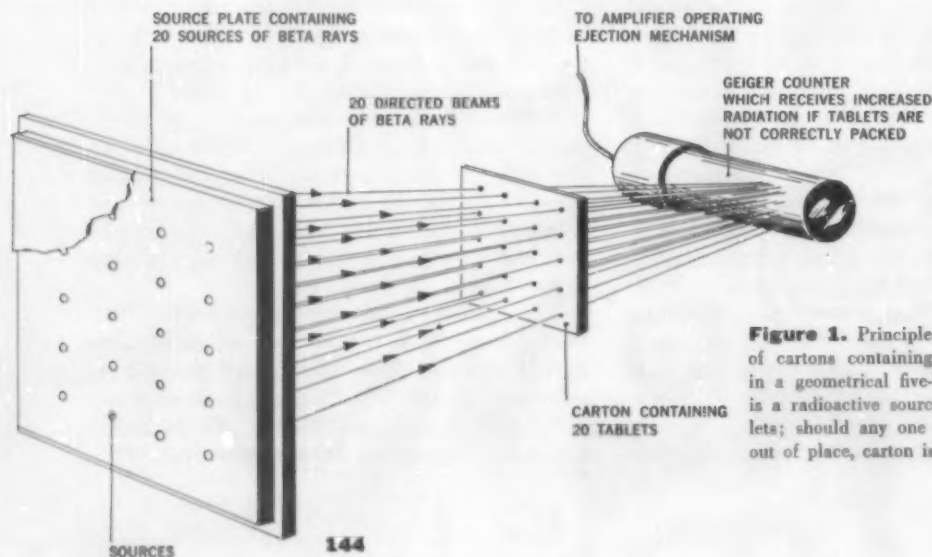
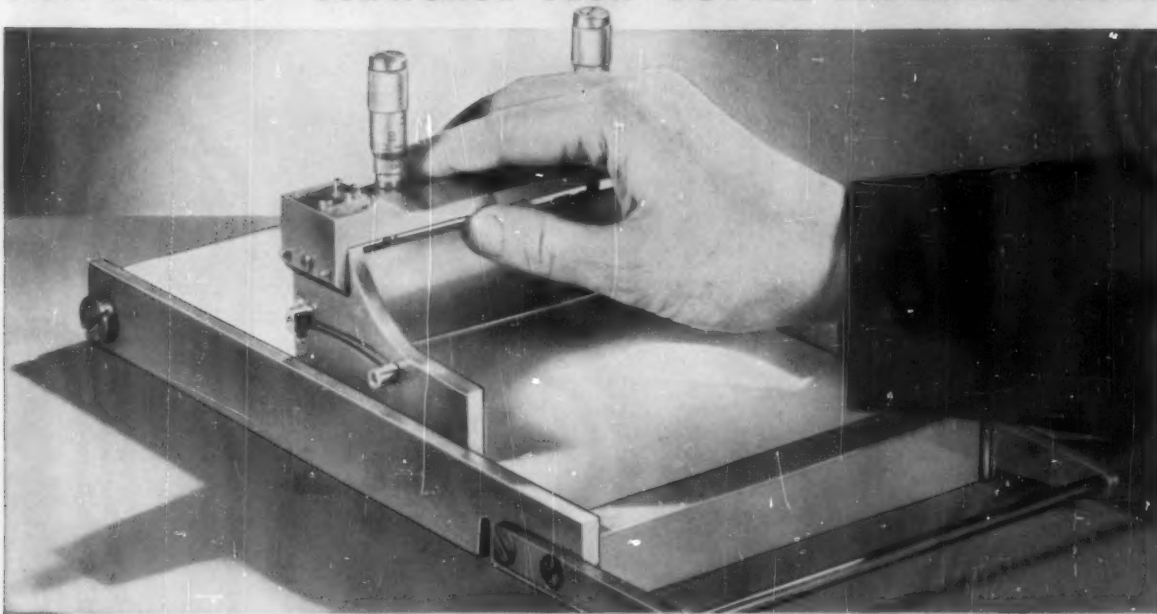


Figure 1. Principle of beta-ray inspection of cartons containing 20 medicinal tablets in a geometrical five-by-four pattern. There is a radioactive source for each of the tablets; should any one be missing, broken or out of place, carton is automatically ejected.

*Sales manager and head of Applications Section, Isotope Developments, Ltd., Beenham Grange, Aldermaston Wharf, near Reading, Berks, England.

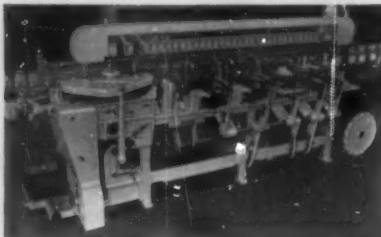
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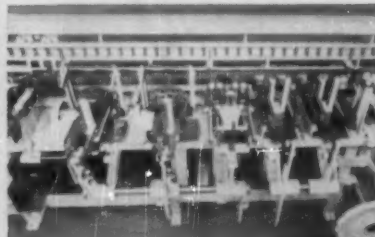
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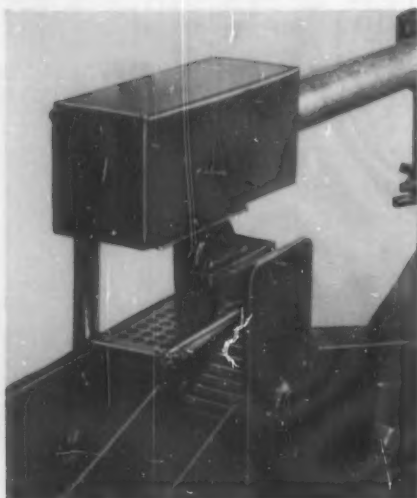


Figure 2. Detector above inspection platform designed to transmit 32 beams of radiation through a box containing 32 cartridges. Any incorrectly packed boxes are automatically directed down the reject chute on the right.

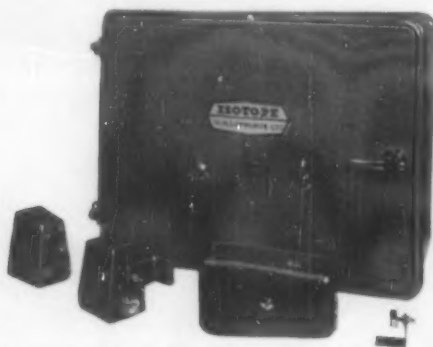


Figure 3. Component parts of a standard package monitor. In the foreground (from left to right), photocell, lamp unit, detector, beta-ray source. In the background, electronic unit.

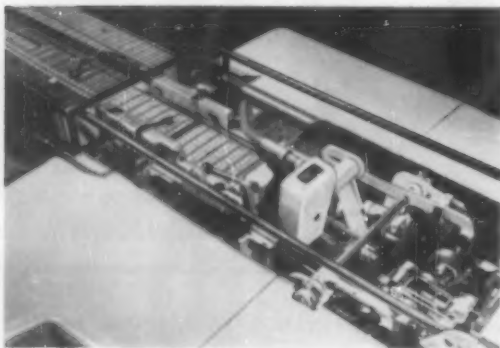


Figure 4. Radioactive detector installed in a tooth-paste cartoning line to check each carton to make sure it contains a properly filled tube. The radioactive source is below the conveyor.

off is in no way harmful to nearby personnel, nor does it affect the product being examined. The useful working life of the source may vary between 18 months and 40 years, depending on the radioactive material chosen. The output from the detector unit, which consists of a Geiger-Muller counter and cathode follower unit in a cast aluminum case, is fed to the amplifier unit in a screened cable.

The photoelectric cell and lamp units are not necessary in all cases, but are often a convenient way of determining the exact time at which the inspection shall take place, by indicating when the package is in the correct position for inspection. In such cases there will usually be a gap between the containers passing along the packaging line, and each container must be brought under the inspection head and given a "dwell." A signal from the photoelectric cell then switches on the monitor for a fraction of a second which has been exactly predetermined.

In some cases the radioactive method supersedes alternative, less efficient, methods, while in others there may have been no satisfactory method previously employed. In the latter circumstances a manufacturer's reputation may suffer, due to receipt by the public of improperly packed or even damaged products. If a tooth-paste tube, for example, is not completely filled, the presence of air in the tube may set up chemical reactions which cause deterioration and discoloration of the paste. The method of inspection employing radioisotopes now being used by one British manufacturer not only insures that each tube is full, but also guarantees that every folding carton arriving at the end of the packaging line does in fact contain a properly filled tube.

For unusual applications a specially designed inspection head may be provided. In the inspection of cartons containing a medicinal tablet, for example, the novel feature of the system is that there is a small radioactive source for each of the tablets in the carton. The arrangement of the 20 tablets in the carton is shown in Figure 1. Two bowl feeders send the tablets down four guides to fill one carton each second by injecting four rows of five tablets. The carton then moves on to the inspection head in which 20 small radioactive sources are arranged in the appropriate five-by-four pattern. Any fault in the five-by-four arrangement of the tablets, whether in the form of a broken tablet, a jumbled arrangement, or a missing tablet, results in a signal to the ejection station, where all faultily packed cartons are automatically thrown out of line.

A system such as this can also be applied, for example, to checking the packing of rifle cartridges packed, say, 32 to a box (see Figure 2) or a dozen vials packed in four rows [Continued on page 195]

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Fog and mold-growth problem

Q: *We manufacture a composite wood and paper product that is built up by pasting many layers and parts. The finished parts are then racked for a day to set the adhesive. We then pack the parts in a polyethylene bag and a heavy-duty paper box. Our problems arise from the fogging of the bag and occasional mold on the product. Is there a simple answer to these problems without making a change in our package?*

A: The fogging and the occasional mold grown in your package results from the moisture due to the many layers of adhesive being trapped in a moisture-tight bag. If you were able to lengthen the time of curing or use force drying to remove the excess moisture, the present package would perform perfectly.

The simplest answer is to perforate the polyethylene bag with a number of holes about a half inch in diameter. These holes will prevent excess moisture from saturating the air space in the package. If there is any possibility of large numbers of the boxes or shipping cases being held in compact piles in the warehouse, a small amount of an inert moisture absorbent could be placed in each bag to insure freedom from fog and mold due to excess moisture in the product.

Highly moistureproof board

Q: *One of our products should be given some moistureproofness in specific market areas. The package is a printed folding carton with glued ends and no liner or over-wrapper. We would like to use a moistureproof board such as KB, asphalt or wax laminated. Are these three types similar in moistureproofness and is there a particular specification for obtaining best results?*

A: There is a wide range of water-vapor resistance in the three types of special paperboards you mention.

KB board is made using an asphaltic emulsion in the center plies and this produces a paperboard with only moderate moistureproofness. A paperboard made by laminating with a continuous layer of wax or asphalt will give good to excellent moistureproofness, depending on the formulation and amount of the laminating medium and the board finish.

The best results can be obtained by using special wax-laminating mediums on a smooth board and applying a well-finished paper as an outer or inner ply. When about 15 lbs. per ream of a waxy adhesive is used and the facing paper is highly calendared, then the result is a very effective moisture barrier. There are many manufacturers of such moistureproof boards and a laboratory test would determine which type is best suited for your needs.

Testing paper-plastics packs

Q: *One of our paper-plastics packages is finding uses for many types of products. Some uses are for frozen-foods packaging, for fresh fruits at cool storage and also for products that are stored at the usual atmospheric conditions. We would like to test these packages for moistureproofness in order to give our customers some idea of the protective qualities of our products. What conditions, product and test method do you suggest that we use?*

A: The moistureproofness of wax, resins, plastic films and similar packaging materials will vary greatly with temperature and the rate of change is different for all materials. The result is that one package construction can be superior at ambient temperatures and inferior at zero degrees Fahrenheit, the temperature of storage of frozen foods. As a result, it is necessary to measure the moistureproofness of a package at a temperature not too far from that of its normal shelf conditions.

It is generally agreed that three

temperature levels will provide reliable test results for the ranges of your products and conditions.

1. A temperature of 100 deg. F. and a 90% relative humidity will provide accelerated laboratory test conditions for packages exposed to ambient conditions in this country.

2. A temperature of 40 deg. F. and a moisture-saturated atmosphere will give test results for packages stored and handled in the type of cool storage used for meats, fresh fruits and vegetables.

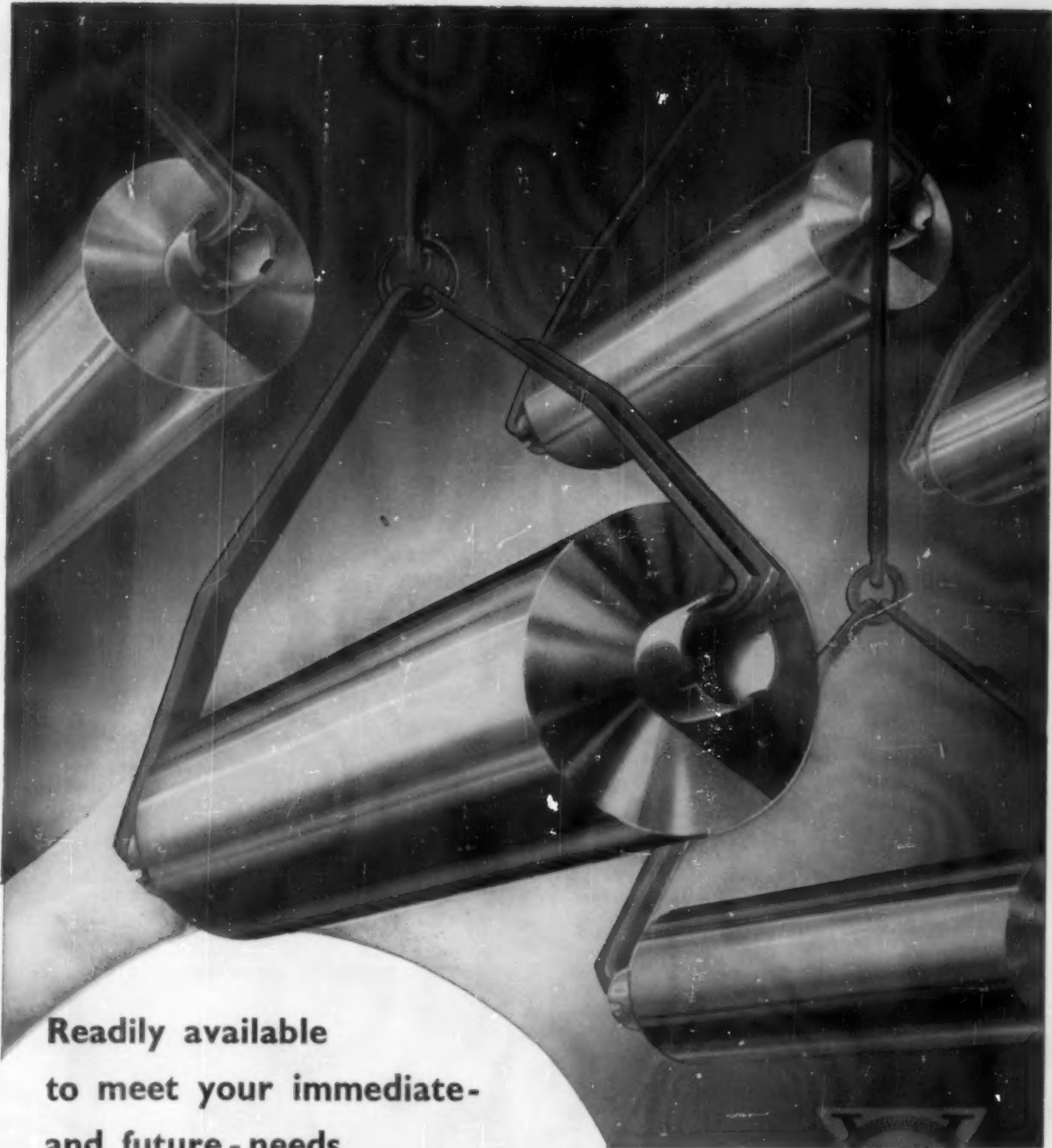
3. A temperature of 0 deg. F. and a moisture-saturated atmosphere will give comparable test results for frozen-food packages.

In your case there are many products involved and for comparative results it is necessary to select a moisture-absorbing material that is uniform and that has a high moisture capacity. Anhydrous calcium chloride is an ideal test medium for this purpose.

The test is performed by enclosing a kraft-paper envelope of the desiccant in the package in place of the usual product. The sample packages are stored in the three test atmospheres and the total weight determined at regular intervals.

The increase in weight is an index of the moistureproofness of the package. Such tests require special equipment to provide uniform and controlled temperature and humidity at the various levels. Also, the results should not be interpreted in days of shelf life under use conditions because of variations in product composition and in commercial storage conditions.

The best way to use such laboratory data is to make comparative tests with your packages against those being used by your customers. Such comparative tests will give you a reliable index of the moistureproofness of your package in comparison with the ones in commercial use for the various products and their storage conditions.



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Equipment and materials

New wrapping machine for retailers

Meats, produce and other foods using boards or trays can be neatly pre-packaged on a production basis at the retail store with a new wrapping machine called the Toledo



Triangle Cross-Wrap, according to the Toledo Scale Co., 1097 Telegraph Rd., Toledo 1, Ohio, exclusive distributor for the unit, manufactured by the Triangle Packaging Machinery Co., 6633 W. Diversey Ave., Chicago 35. Reduced costs through time-

saving single-operator wrapping, easy adjustment for a wide range of package sizes with a single control lever, and adaptability for efficient production flow due to compact construction are advantages claimed for the new machine. It provides unusual flexibility in installation, with provision for either elevated shelves or table shelves for film storage. The cross-wrap design makes efficient use of corner locations, or it can readily be installed for in-line production flow. Wrapping procedure is simple, according to the supplier. The operator places film over the food package and in a single motion makes the first spot seal before placing it in the machine carrier. The machine then automatically completes the wrapping and sealing cycle.

Gravure press for flexible materials

A new Italian gravure press, designed especially for American converters of flexible packaging materials, has been announced by Parsons & Whittemore Graphic Corp., 250 Park Ave., New York 17, western hemisphere distributors



of Cerutti rotogravure printing equipment. The new "Series R" Rotopackager is said to offer top-quality printing at high operating speeds and may be used by small as well as large converters. Made in printing widths of 30, 32, 36, 40 and 42 in., the new unit-style press has an exceptionally large working space between units, it is reported. A completely open aisle allows the operator 3 ft. between units and 6 ft. headroom, which aids in servicing and changeovers and makes the press suitable for both short and long runs. The standard six-color press has three reversible units for back printing and two flexographic conversion units for imprinting slug changes and printing special effects.

New foil-paper packaging materials

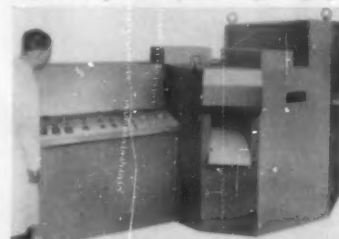
Metalseal, a new foil-paper combination designed specifically for carton overwrapping, has been announced by The Dobeckmun Co., P. O. Box 6417, Cleveland 1, Ohio. The new foil-surface wrapping material heat seals quickly and securely and is resistant to water vapor, according to the company, and does not break or shrink during cold weather. Transparent inks give the overwrap a bright, metallic ap-

pearance. It is not necessary for wrapping machines to strike through the tissue to obtain a good seal, the company reports, and the wrap adheres to the carton when the seal is made. Metalseal #1 is printed aluminum foil laminated to paper coated with a melted wax-resin blend. Metalseal #2, a more economical wrap, is a combination of printed foil and paper with the melted wax-resin blend applied to the foil only on specific areas where the wrap is to be sealed.

A new foil packaging paper, said to offer a high degree of protection from moisture and insect infestation in the packaging of cake mixes, cereals and other dry powdered products, has also been developed by Dobeckmun. It consists of bleached sulfite paper mounted to foil with rough surface polyethylene extruded on the foil surface. The polyethylene is reported to be specially treated so that paper-to-polyethylene glue seals can be made on the sides and bottom, and heat sealed on top. The material is said to perform on Pneumatic Scale Co.'s double package maker.

Thermoforming equipment for packaging

A new series of thermoforming machines and accessories designed in Switzerland by Hydro-Chemie, Ltd., P. O. Box Zurich 22, specifically for the packaging industry is reported



to produce low-cost, disposable containers. Designated "Formpack" to differentiate it from the company's "Formvac" equipment for thermoforming industrial products, first of the new series is the

"Formpack" R-7, a six-station rotary thermoforming machine which works on a full automation principle. It uses the "Dropform" technique to produce containers and closures. Maximum forming area is 10 by 12 in. When multiple-unit molds are desired, only 1/4 in. is required between units. Rotary design of the unit is said to enable maintenance of a constant maximum production cycle regardless



of sheet thickness. In a 20-cavity mold, 20 containers can be ejected in trimmed condition every 3 sec., giving a production rate of 24,000 per hour. Container walls can be extremely thin, down to 0.004-0.006 in., with adequate strength because of the bi-directional orientation of the sheet during the Dropform process, aided by incorporating

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(Acetyl Triethyl Citrate)

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CITROFLEX A-4 is also nontoxic, odorless and accepted by the F.D.A. for use in plastic packaging of either fatty or non-fatty foods. You can use CITROFLEX A-4 to plasticize vinyl films for meat wrapping...vinyl coatings for food containers...vinyl plastisols for bottle crown liners, food jar sealing rings and "safe teething" vinyl toys. Compare the cost of efficient CITROFLEX A-4 with other F.D.A. accepted vinyl plasticizers.

Besides A-2 and A-4, the Pfizer CITROFLEX line includes CITROFLEX 2 (Triethyl Citrate), CITROFLEX 4 (Tributyl Citrate) and CITROFLEX A-8 (Acetyl Tri-2-Ethylhexyl Citrate). Check into the Pfizer CITROFLEX plasticizers today. Mail the coupon below.

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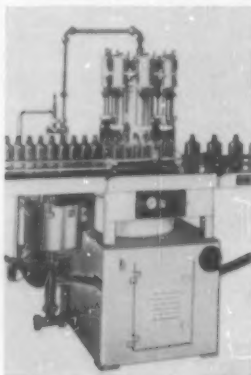
Equipment and materials

[Continued from page 150]

reinforcing ribs. The rotary principle involves six clamp frames which rotate through 360 deg. in a horizontal plane, the turning movement being indexed to stop every 60 deg., each of the six stages completing a production cycle—loading of sheet, heating, forming, trimming, ejection of finished product and ejection of trim. Automatic loading of the sheet may be from a roll or from a stack. Heating is by infra-red heaters and forming is done mainly by the company's Dropform process. Trimming is done by shearing dies while the product is held in position by the vacuum, followed by ejection of the product. Trim is removed in such a way that it can be taken away to a reclaiming operation without exposure to dust contamination. Advantages claimed for the small forming area of the unit include low cost of molds and trimming tools, easier after-handling of trimmed products and the ability to handle pre-printed sheets.

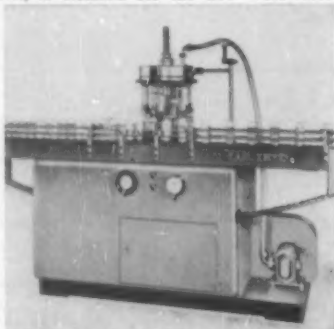
Two new filling machines

A new rotary pressure-vacuum filler and a new metered filling machine for viscous and liquid products have been announced by The Karl Kiefer Machine Co., 919 Martin St., Cincinnati 2, Ohio. Liquid filling of the constant-level type used in the rotary pressure-vacuum filler (left) is said to offer the following advantages: higher speeds, even with viscous products; low vacuum can be carried when filling "F" style cans or collapsible containers which have a tendency to collapse under high vacuum or to bulge with use of excessive pressure; low vacuum can be carried when filling volatile products which would have an excess evaporation loss under normal vacuum. The machine can



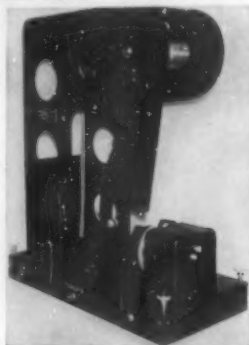
be operated as a straight pressure machine with no vacuum if desired and, with special construction, can fill under super-atmospheric pressure entirely, with the overflow under a lower pressure than the supply.

More efficient, positive and accurate filling of such products as mayonnaise, peanut butter, shortening, creams and ointments, paints, etc., is claimed for the new Vari-Visco metered fillers. The machines reportedly eliminate pistons, gears, cams and complicated adjustments. Volume change or change in operating speeds is effected by turning a hand wheel. Product measurement is accomplished by means of the number of revolutions of a rotary impeller pump controlled by a variable-speed drive. The machines are said to lend themselves to accommodate wide ranges in speed and volume. By building two or more pumps into the unit, it can be made into a two-, three- or four-stream machine so that more than one container can be filled at a time. Illustrated is the Cadet Model conveyor-type Vari-Visco unit.



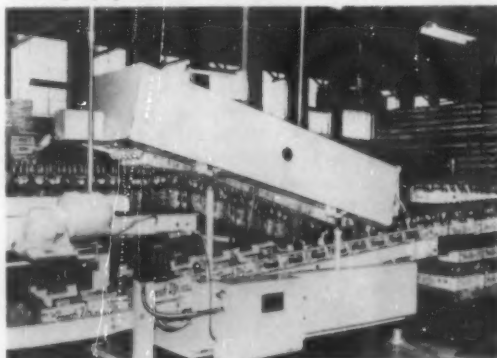
New impact testing machine

More reliable measurements of impact strength for plastics, paper, cellophane, boxboard and similar materials are claimed for the new pendulum impact tester announced by the United States Testing Co., Inc., 1415 Park Ave., Hoboken, N. J. Impact strength is found on the instrument by measuring the energy lost by its swinging pendulum when it breaks through a sample. Energy of the pendulum on an uninterrupted swing is compared with its energy after breaking the sample. Distance is not measured directly on the tester, but is calculated from the pendulum swing time, measured to within 0.001 sec. on the instrument's electric timer. This value is converted directly to impact strength on conversion tables supplied with the tester. Complete test procedure is said to take only a few minutes, with no special sample preparation required. Interchangeable striking heads simulating different kinds of impact are provided.



Automatic half-depth uncasing machine

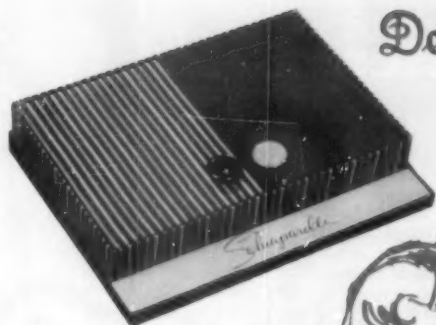
A new uncasing machine which is reported to unload automatically in one minute up to 500 standard-size soft-drink bottles from half-depth cases and speed them to bottle-washing equipment has been announced by the Radio Corp.



of America, Theatre & Industrial Products Dept., 30 Rockefeller Pl., New York 20. This new Model 7-U is said to be adjustable in minutes for processing virtually all types and sizes of bottles and half-depth cases standard in the soft-drink industry. It features a work-level case infeed which conserves floor space and does away with the need for special crest-type conveyors previously required. A lower-cost four-wide model is also available for unloading 6- to 12-oz. bottles from 24-pocket cases and from master cases for four six-pocket or two 12-pocket carry-home cartons. The four-wide model can easily be modified by plant personnel for unloading three-wide cases, the company says.

New-type lettuce bag

The Dobeckman Co., P. O. Box 6417, Cleveland 1, Ohio, has added a new-type lettuce bag to its stock-products line that is different in size, opening and closing features, positioning of perforations, as well as the type of film used. Dimensions are 11 by 8 1/4 in., with 1 3/4-in. bottom gusset. The bag, made of a special polyethylene, has dead-fold



Dennison boxes fashionable spectacles in spectacular fashion!

Schiaparelli frames accent the eyes of women who want beauty in every glance—and as pretty as the eye-glasses are the denim-covered boxes they come in. These boxes are made at the Marlboro, Massachusetts plant of Dennison Manufacturing Co. for the American Optical Co., exclusive distributors of Schiaparelli Lunettes. Dennison uses Gair boxboard to produce these, as well as many other of their outstanding set-up boxes.



GAIR  *boxboard*
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Equipment and materials

[Continued from page 152]

characteristics that enables a "spin-shut" closure. It opens at the 11-in. side for easier loading and the perforations along the other 11-in. side are spaced to fall around the packaged lettuce head for proper ventilation.

New chain conveyor unit

Bottles, jars or cans are delivered to single or multiple liquid fillers by a new conveyor unit available from the Arthur Colton Co., 3400 E. Lafayette Ave., Detroit 7, Mich.



The conveyor can be mounted on the front of pedestal or base-mounted fillers. It can also be pedestal mounted or attached, as illustrated, to a roller stand for use with bench-type fillers. The 3-in.-wide conveyor is a plain-surfaced,

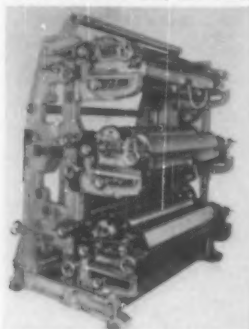
single-chain type, made of nylon, steel or stainless steel flights as required. Conveyor speeds are adjustable up to 80 fpm by change of drive sprockets. A three-air-cylinder escapement controlled by a solenoid-operated master valve is provided when required.

A new pressure-sensitive tape

The Connecticut Hard Rubber Co., 407 East St., New Haven 9, Conn., has announced a new pressure-sensitive Teflon-impregnated fiberglass tape known as Temp-R-Tape TG, said to reduce destructive sticking, build-up, wear and friction on packaging and converting machines. It can be applied to heat-sealing bars to eliminate sticking in film packaging. The new tape is available in 12-yd. rolls, 10 mils thick in $\frac{1}{2}$ -, $\frac{3}{4}$ -, 1-, 1 $\frac{1}{2}$ - and 2-in. widths and by the lineal yard 12 in. wide. In the latter form it can be cut or died out in special shapes.

Rugged multicolor flexographic press

The new Model 410 printing press announced by the Potdevin Machine Co., 285 North St., Teterboro, N. J., when



directly connected to a Potdevin bag-making machine, automatically prints and converts paper rolls into specialty bags of varied size at higher speeds than heretofore. The press is of four-color frame design, but can be used for two to four colors. If a converter orders the press for two colors only, the additional color units may be added at a future time. Plate cylinders are arranged for accommodating adhesive-backed rubber printing plates. Running circumferential and lateral adjustments are conveniently located for quick, simple registration, according to the supplier.

Machine produces re-usable blister packs

Tronomatic Machine Mfg. Corp., 1881 Park Ave., New York 35, has announced a new machine, utilizing a 180-deg. flange bender for making vacuum-formed blister packages that may be easily opened for product to be slipped out for inspection by the customer, then reclosed without

damaging or marring the container. According to the company, blisters attached together on end, "string fashion," should be used for best results. Strings up to 30 in. long are easily folded, it is claimed. One flange of the string is folded with each cycle of the machine and the machine will cycle eight to 12 times per minute, depending on material thickness. Blisters 2 $\frac{1}{2}$ in. deep, 30 in. long and 12 in. wide can be folded. The machine can accommodate single blisters and will also fold any number that can be accommodated in the 30-in. fold length. Folds can be modified so that any thickness of board can be slid into the gaps and the folds are reported to hold tightly to the board.

New rotating unwinding machine

Black-Clawson Co., Dilts Div., Fulton, N. Y., has introduced a new shaftless rotating unwind with individually adjustable arms, for continuous operations such as coating, saturating and corrugating of paper and board. Principal



feature of the machine, known as the Model 42-100, is that different roll widths can be run successfully without stopping the process for set-ups, according to the company. Each set of arms can be independently adjusted for roll widths either

by manually moving the arms (see photograph) or by a power screw attachment. Rolls up to 50 in. in diameter by 100-in. face can be accommodated. The reel is floor loaded from one position.

Single-trip molded polyethylene drum

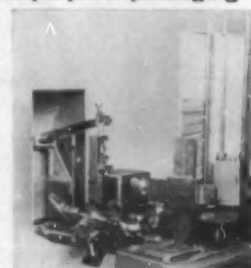
A non-returnable, single-trip molded polyethylene drum for use in conjunction with fibre or steel drums has been developed by the Delaware Barrel & Drum Co., P. O. Box



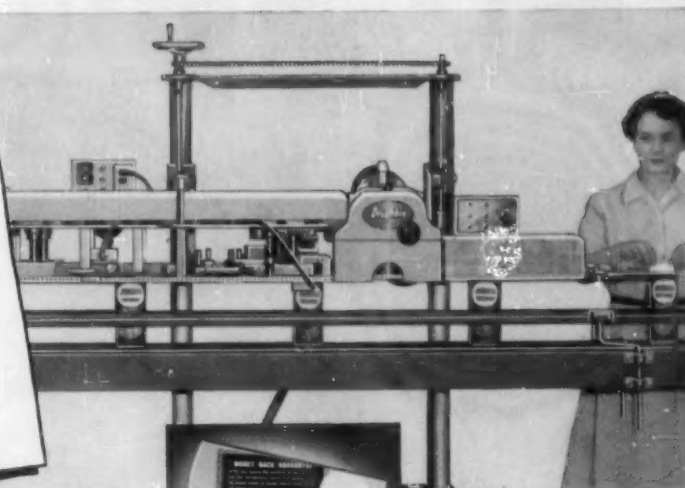
1648, Wilmington 99, Del. Molded in one piece without welds or seams, the plastic drum, particularly in the fibre drum, is said to offer savings in weight and ease of handling. The plastic drum, unaffected by many corrosive materials, is supplied with any desired combination of filling and emptying closures and, with the fibre or steel drum, can be handled, palletized, filled, emptied and shipped exactly like a steel drum. According to the supplier, the plastic drum in fibre has received approval by ICC, O.F.C. and N.M.C. for shipment of 800 lbs. gross weight of regulated and non-regulated products under test permit.

Glue attachments for tamperproof packaging

Standard tuck gluing attachments to provide tamperproof packaging and improve protection of cartoned products have been introduced by the Bivans Corp., 2431 Dallas St., Los Angeles. Useful for many applications in which cartons are mailed without overwraps, the attachments are reported to meet Federal specifications for tamperproof cigar cartons. They can be installed on the company's Convey-O-Mat and Tuck-O-Mat automatic cartoners and Model 518 carton



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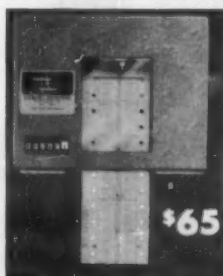
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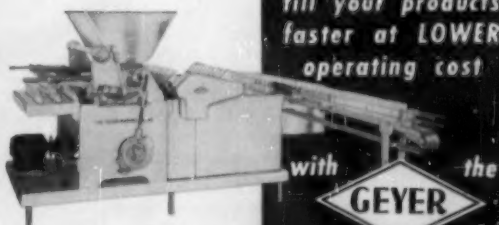
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the original builder of
Philadelphia piston fillers

Equipment and materials

[Continued from page 154]

closer. The attachments seal carton tucks and, for sealing cartons at both ends, they are available for the closing unit.

Air-operated bottom stapler

The versatile new Model BSA-Jumbo stapling machine announced by Container Stapling Corp., 308 N. Park Ave., Herrin, Ill., not only sets up regular and end-slotted con-



tainers and overlap cartons, but can erect telescope boxes, staple Jiffy and multiwall bags, set up flat pieces of interior packaging, or staple flat pieces of board together. The machine may be had as a combination of post and arm, with post only, or with arm only. It is said to set up any style of carton in only a few seconds, using large industrial-size staples. Since only four of the staples are required to erect the average-sized box, the machine is said to offer savings in materials cost. The unit weighs only 95 lbs., thus can be moved to various packaging areas. It is said to require a minimum of maintenance because of the extreme simplicity of design, with no moving parts in the stapling head.

A new laboratory coater

L. R. Wallace & Co., 172 N. Vernon Ave., Pasadena 3, Calif., has announced a new laboratory coater incorporating such features as a pick-up roll which picks up the coating



medium from a reservoir, transfers it to a transfer roll and to the coating roll for accurate coating control. This model 57-L-1 also has an adjustable bottom roll, which is said to eliminate the necessity for disturbing the coating-roll adjustment for a variety of material thicknesses. The coater is available with steel and rubber rolls for inks or lacquers, enamels and a wide variety of coating materials. Transfer and pick-up rolls measure 2½ in. Spreader and pressure rolls measure 4 in.

Improved new gummed paper tape

Crown Zellerbach Corp., 343 Sansome St., San Francisco 19, has introduced an improved gummed paper tape that has a



glue film which is diagonally broken to form thousands of microscopic channels to speed water flow and give more pliability. The new gummed tape, called Micro Pliable Flash-Tite, can be molded like wet cloth. Tiny glue fractures—magnified many times in the accompanying illustration—are formed by micro-diagonal breaking and relax surface tension so that the problem of end curl is eliminated, the company claims. The glue formula reportedly speeds initial tack, yet retains stickiness for long periods.

New mill service for flocked papers

Cellusuede Products, Inc., 500 N. Madison St., Rockford, Ill., has announced a new mill service for suede, velour and carpet-type flocked papers, which is equipped to handle a wide range of colors and textures on both cover and lightweight papers. Rolls of flocked paper in stocks ranging

from bending chip to lightweight box cover are being produced in widths up to 52 in. According to the company, even the longest flock fibres will not crush, "telescope" or fall apart. Nineteen different hues are being offered and a variety of textures, all said to be especially suited to offset and letterpress printing. A complete sample kit is being offered by the company.

Portable, hand-operated stapler

Tops of filled corrugated containers can be stapled entirely from the outside with wide-crown staples when using the new D14 Boxlok portable, hand-operated stapler introduced by Bostitch, 1037 Mechanic St., Westerly, R. I. One easy twist of its "quick-adjust" knob, according to the company, accurately regulates both depth of staple penetration and tightness of the clinch, making it unusually fast and easy for the operator. The compact, lightweight unit uses 1½-in. wide, 0.040 by 0.090 in. staples of either ⅝- or ¾-in. leg length. Construction features a cast-aluminum body.



Package-tester shocks absorbed

A new 1,000-lb. incline-impact (conbur) package tester with a ballasted barrier that absorbs shock and vibration



has been developed by the L. A. B. Corp., 1010 Onondaga St., Skaneateles, N. Y. The new tester is said to absorb a large portion of impact shocks to floors and surrounding machinery, yet does not interfere with testing efficiency. The barrier is filled after installation of the machine with 10,000 lbs. of sand, gravel or other loose, heavy material which can be easily removed if it becomes necessary to relocate the machine. The testing mechanism is reported to be identical with standard L. A. B. conbur testers.

Automatic net-weighing machine

The Exact Weight Scale Co., 944 W. Fifth Ave., Columbus, Ohio, has announced a new automatic net-weighing machine, Model 447-22-NW-1500, designed for use in very restricted



overhead-clearance areas. An air-operated slide valve is mounted directly on the customer's storage hopper to maintain minimum overhead clearance. A special dust seal on the valve is operated by an air cylinder mounted on front of the slide valve. The dust seal raises and seals the valve when the supply hopper is being filled. Weigh bucket of the unit may be mounted within 1 in. between the lowest portion of the two-speed filling slide valve and weigh hopper, providing a minimum of material in suspension at the final cut-off. The scale employs an even balance-lever system with a visual indicator and dial.

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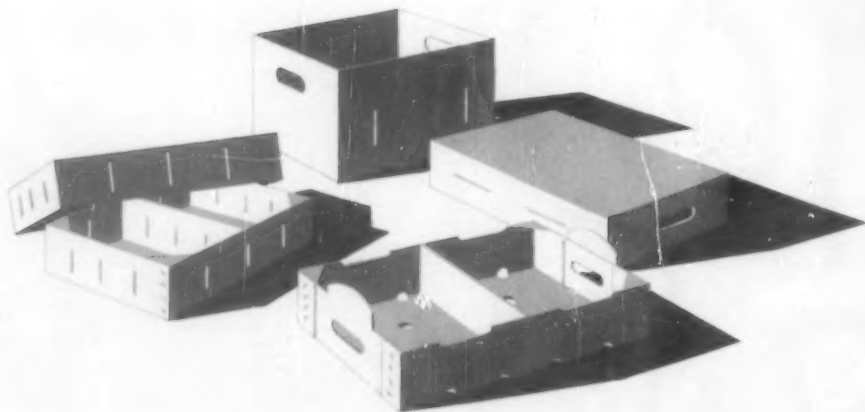


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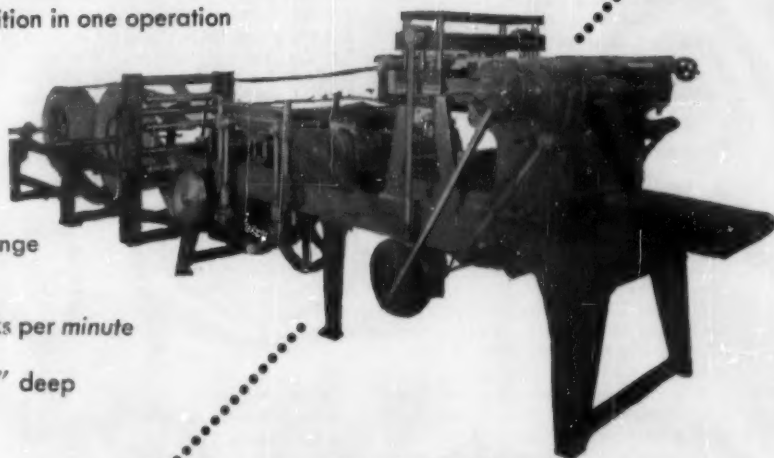
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INMAN

Manufacturing Co., Inc. AMSTERDAM, N.Y.

Plants and people

The Dow Chemical Co., Midland, Mich., and The Dobeckmun Co. of Cleveland, Ohio, have approved a proposal for merger of the two companies, subject to ratification by Dobeckmun stockholders this month. Dobeckmun will continue to operate with its present staff under the title of The Dobeckmun Co., a division of The Dow Chemical Co.

Paul M. Jensen has been advanced to a new position with the plastics sales staff at Dow headquarters where he will handle special assignments in connection with molding materials. John E. Donalds has succeeded him as plastics sales supervisor in Detroit.

Lloyd Merwin has been elected vice president of Crown Zellerbach Corp., San Francisco, and has also been named general manager of converted products for the firm's Gaylord Container Div. W. E. Parkinson has succeeded Edward H. Nunn as resident manager of Crown Zellerbach's pulp and paper mill in Carthage, N. Y. Mr. Nunn is now resident manager of the St. Francisville Paper Co. mill in St. Francisville, La., a firm jointly owned by Crown Zellerbach and Time, Inc. D. S. Coney has been appointed director of management development at company headquarters in San Francisco.

Crown Zellerbach recently acquired the site for a new pulp and paper mill near De Ridder, La., and has purchased 27,000 adjacent acres for reforestation to assure the mill's future wood supply.

National Starch Products, Inc., New York, has taken a lease on premises in the building being constructed at 750 Third Ave., New York.

A new firm, devoted entirely to the production and development of specialty

laminates, has been formed in Brooklyn, N. Y., and is now in commercial operation after a six-month experimental and pilot-plant period. Steven J. Post is director of sales and Jack Mac Vittie has been engaged as sales executive to cover the eastern seaboard for the new organization, Liberty Laminates, 47-50 Metropolitan Ave., Brooklyn.



Jones

S. W. Jones, Jr., has joined the Organic Chemicals Div. of Food Machinery & Chemical Corp. as manager of plastics development. He was formerly with the chemical manufacturing division of M. W. Kellogg Co. and prior to that was with the plastics division of the Celanese Corp. of America, New York.

Frederick S. Leinbach has been elected executive vice president of Riegel Paper Corp., New York. In the Packaging Ma-



Leinbach Hoffman Postweiler

terial Sales Div., C. W. Hoffman has been promoted to midwestern sales manager. He will headquarter at Edinburg, Ind. N. W. Postweiler is now Eastern sales manager for packaging materials, working from the company's New York City office. Walter Wilhelm has been named sales development manager for the midwestern territory, while Edward Penn holds the same position for the eastern territory. Winthrop Endicott has been promoted to the new post of product manager. He will be

assisted by William Riegel and Wilson Cross, both recently appointed as product supervisors. John White has joined Riegel to handle packaging materials in the central midwest.



Calkins

Dr. C. R. Calkins has been appointed to the new post of director of research and development for all the company's operations.

He has been with the organization since 1947. Donald G. McGill has been promoted to technical director of the firm's New Jersey division.

Inland Container Corp., Indianapolis, Ind., plans to construct a corrugated box plant in Evansville, Ind., to be in operation at the end of this year. H. E. Curtis and J. G. BaShaw will share the management of the new facility.

Thomas O. Williams has been appointed assistant sales manager of the Film Div. of American Viscose Corp., Philadelphia, Pa. He was formerly customer and sales service manager.

Sun Chemical Corp., Long Island City, N. Y., has completed purchase of the Bensing Bros. & Deeney companies in a cash transaction by which the newly acquired subsidiaries will continue under present management and name.

Dennison Mfg. Co., Framingham, Mass., is now producing all pressure-sensitive labels at its plant in Framingham. This move is aimed at better service for customers by allowing the firm complete control over orders, from design to delivery. Dennison is also offering manual and electrically operated label dispensers.

Charles E. Wright, veteran sales and purchasing executive, has retired after 51 years service with the Dennison organization.

Eight large foil rolling mills went into production recently at the Davenport, Iowa, plant of Aluminum Co. of America, Pittsburgh, Pa. The new mills have an annual capacity of 24,000,000 pounds.

The Dobeckmun Co., Cleveland, Ohio, has appointed James Oliver to the new position of product development manager of the company's West Coast Div. in Berkeley, Calif.

Jack Arthur has established Closure Systems, 520 W. 36 St., New York. The new firm will be a distributor for products of International Staple & Machine Co. of Herrin, Ill. Mr. Arthur recently resigned as vice president of International Staple.

T. Eugene Crawford has been promoted to mid-continent sales manager for the

A New Western States Editor

In a move to localize and intensify its coverage of rapidly expanding packaging activities in the 11 Western states, MODERN PACKAGING announces the appointment of Edmund L. Van Deusen, a former associate editor of *Fortune* magazine, as its Western States Editor.

Mr. Van Deusen, who lives with his wife and three children in Laguna Beach, Calif., will operate out of the Los Angeles office of MODERN PACKAGING, at 6535 Wilshire Blvd., Los Angeles 48.

A talented writer who has contributed to *Collier's* and other magazines, Mr. Van Deusen is well qualified also by his business and publishing experience. A chemical engineer, graduate of Pennsylvania State University, he has bought chemicals for the DuPont company, sold chemicals for Davison Chemical Co. and written about buying and selling for *Chemical Week* magazine. At *Fortune* he authored a number of major articles on plastics materials and the plastics industry. Since moving to the West Coast he has been a free-lance writer and a consultant in advertising, sales promotion and marketing.



Van Deusen

*"The box gives extra
mileage, too!"*



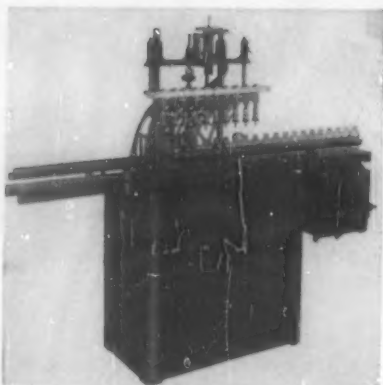
Your product gets extra brand
identity when your shipping box
strongly resembles your unit package.
Want family packaging ideas?
Better see H & D.



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Subsidiary of West Virginia Pulp and Paper Company

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FASTER FILLING

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PERL FILLING MACHINES

FOR VACUUM, GRAVITY OR PRESSURE

ALSO AVAILABLE WITH

ELECTRO PNEUMATIC CONTROLS

New design model COS-K, illustrated, operates by vacuum, in a range of sizes and filling speeds from 20 to 100 bottles per minute and capacities up to 5 gallons. No foot pedals, no hand levers, just a touch of a button! Even the most unskilled operator immediately attains full production speed.

Write for Circular P-3



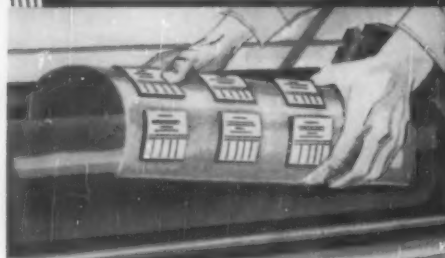
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**NEW P & D
MODULUS
CONTROL!**



SOLID AREAS:

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Holds accuracy and sharpness for perfect reproduction every time!

HALFTONES!

Cleaner dot structure... sharper detail... reduced "hole"!

COMBINATION PLATES!

Made with two durometer hardnesses—one for line, another for halftones!

P & D "MODULUS CONTROL" represents a new approach in rubber plate making—proved by thousands of field tests to give better impressions, longer wear! Plates made this way require less pressure to compress... less time to return to shape. Result: lighter printing pressure, clearer reproduction, perfect split of ink film!

AVAILABLE IN BOTH P & D INDIVIDUAL "STICK-ONS" AND COMPLETE "MINUTE-MOUNT" UNITS
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Complete art, typesetting and engraving facilities available

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Foremost in the Development of Rubber Printing Plates

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CHICAGO 4, ILLINOIS

Plants and people

Container Div. of Jones & Laughlin Steel Corp., Pittsburgh, Pa. He will headquarter in Kansas City, Mo. Palmer Supplies Co. has been appointed to represent the Container Div. in Cincinnati, Ohio.



Niehouse
formerly associated with Olin Cellophane in New York.

Oliver L. Niehouse has been appointed to the newly created position of advertising and sales development manager by TCF of Canada, Ltd., Montreal, Canada. Mr. Niehouse had been sales promotion manager for TCF since 1955. He was

Hercules Powder Co., Wilmington, Del., recently opened a multi-million-dollar plant at Parlin, N. J., for the production of a new type of polyethylene plastic, which, according to the company, is harder, more abrasion resistant and resistant to higher temperatures than the conventional polyethylene. The facility, already in commercial production, is expected to make 30,000,000 lbs. of polyethylene annually.



Shelton

Marvin L. Shelton has joined Fleming & Sons, Inc., Dallas, Tex., as general manager of the container division. He will head the newly formed shipping container division which has been set up at the firm's Dallas mill, with Thomas E. Holden as plant manager.

The Paper Machine Div. of Black-Clawson Co., Watertown, N. Y., has installed a new paper machine at the Dierks Paper Co. pulp and paper mill in Pine Bluff, Ark. The machine is designed to produce daily 150 tons of high grade kraft paper and board at speeds from 200 to 1,500 ft. per minute. Dierks Paper Co. is a subsidiary company of Dierks Forests, Inc.



Pederzani

associated with the Frazer Paper Co.

Guy A. Pederzani has been appointed superintendent of the coating division of Nashua Corp., Nashua, N. H. He takes over the post vacated by the recent death of Lester R. Hill, to whom he had been assistant since joining the company in 1948. Prior to that time Mr. Pederzani was associated with the Frazer Paper Co.

With the completion of major plant construction and the addition of new equipment, production capacity has been doubled at the Jacksonville, Fla., fa-

Here's why America's leading cereal companies use Rhinelander

Glassine



MOISTURE RESISTANCE . . . waxed,* wax laminated, or coated glassine protects crispness and full flavor. Provides a barrier to rancidity.



EASE OF HANDLING . . . The superior uniformity of Rhinelander Glassine papers means smooth performance on high speed packaging equipment.



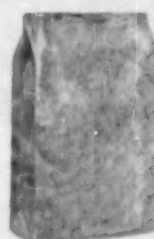
GREASEPROOF . . . Preserves "buy appeal" . . . protects outer package from staining due to possible seepage of shortening and oil content.



APPEARANCE . . . Glassine provides smooth, glossy appearance of quality—available in opaque or transparent grades as well as striking colors.



FOLDING . . . the excellent folding qualities of Glassine permits positive re-closing of package after part of the contents have been removed.



ECONOMY . . . Few packaging materials even approach Glassine on a cost-performance basis.

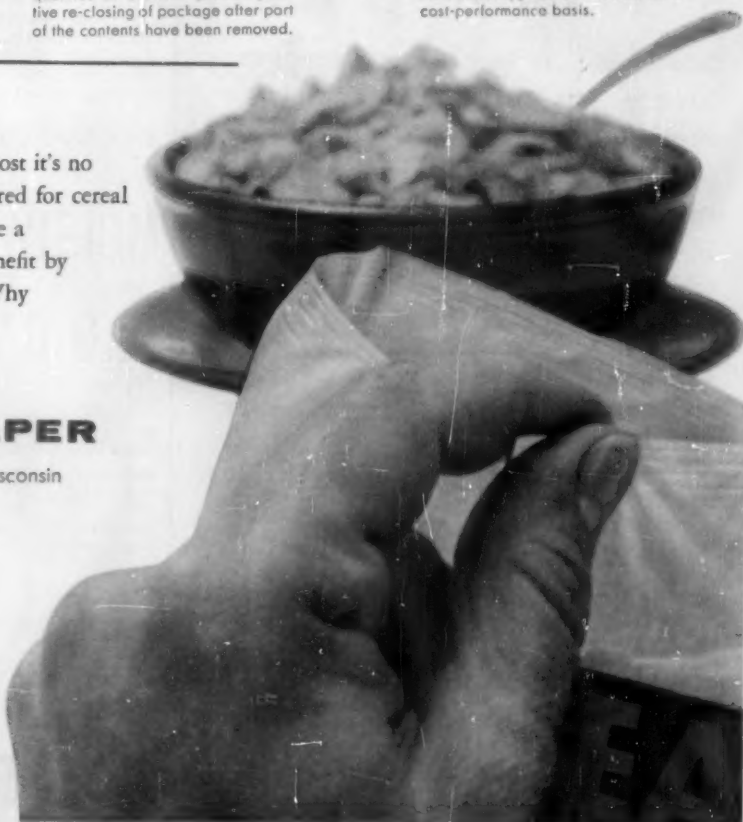
Yes, with so much to offer at so low a cost it's no wonder Rhinelander Glassine is preferred for cereal packaging protection. Perhaps you have a perishable food product that would benefit by the many advantages Glassine offers. Why not drop us a note about it?

RHINELANDER PAPER

Rhineland Paper Company, Rhinelander, Wisconsin
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*Waxed and printed grades available through leading converters



GOLD

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Genuine Gold ... the classic symbol of elegance and refined taste ... can be applied like any ceramic label or decoration ... at a cost only slightly higher than common color. Screen printed on glass or ceramic surfaces, permanently fired to resist abrasion and corrosion, Hanovia 22 Karat liquid gold adds the vital "extra" to any sales program.

Take advantage of the eminence inherent in real gold printing or decoration on ceramics.

For information, contact your glass container supplier.



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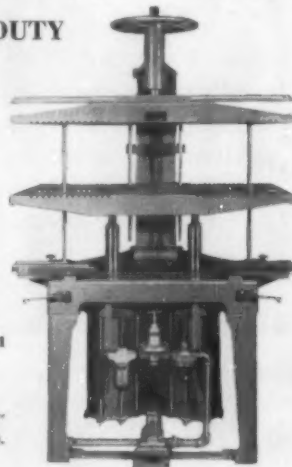


plenty of **MUSCLE** for the heavy jobs:

Here's the answer to the toughest Multiwall Bag Baling assignment. The West Heavy Duty Multiwall Bag Baler was specifically designed to handle the most difficult Bag Baling assignments. Available in a wide size range, it produces the tightest packages every time. Equipped with two eight inch air cylinders, it delivers 10,000 lbs. of pressure evenly distributed over the entire platen area. The heavy cast frame is designed for continuous, rugged operation, adjustable guides always assure even sides . . . neat packages.

THE WEST HEAVY-DUTY

MULTIWALL- BAG BALER



SIZE OF
PACKAGE: MINIMUM MAXIMUM

Length	21 1/2"	44"
Width	13 1/4"	25"
Height	10 "	14"

STROKE: 16 1/2" Floor Space: 36"
x 45" Shipping Weight: 2500 lbs.



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Designers and Builders of Equipment for the Bag Industry:
BALING PRESSES • MULTIWALL BAG PRINTING
PRESSES • MULTIWALL BAG SEWING MACHINES

Plants and people

cility of Anchor Hocking Glass Corp., Lancaster, Ohio. The plant was formerly the site of Tropical Glass & Box Co., recently acquired by Anchor Hocking.



Jones

Owens-Illinois Glass Co., Toledo, Ohio, has promoted Frank Jones, Jr., to southern regional sales manager for the glass container division. Mr. Jones, who joined the company in 1941, had been branch manager in the Atlanta sales office since 1954.

Transpak, Inc., of Miami, Fla., has moved to its new plant at 4001 E. 10 Ct., Hialeah, Fla., where offices and production and warehouse facilities are now located.

A newly formed firm, Thomson-Leeds Co., Inc., located at 106 Central Park S., New York, is offering a complete point-of-sale display, packaging and merchandising service.



Young

J. W. Young has been appointed as general sales manager of the ribbon division of Minnesota Mining & Mfg. Co., St. Paul, Minn. Most recently, he was cellophane tape sales manager to the grocery trades, prior to which he was sales manager for the same product in the company's New York City sales office.

Growers Container Corp., Salinas, Calif., has sold its Flexible Packaging Div. plant to Packaging Containers, Inc., of Portland, Ore. No major personnel changes at the plant are expected. Bruce Church and Ira Keller will serve on the board of Packaging Containers, which will continue to service the plant's present customers.

Sinclair & Valentine Co., New York, have started construction on two new plants, in Kalamazoo, Mich., and Seattle, Wash. The new plants, which will employ the latest equipment, are expected to be in production at the end of the year and will service Northern Michigan and the Pacific Northwest.

Ralph H. Krueger has been named as assistant advertising manager of the Chicago Div. of The Kendall Co., Chicago.

Thatcher Glass Mfg. Co., Inc., Elmira, N. Y., has appointed Marion John Voss as chief chemist in charge of the analytical section of the research laboratory.

The E. W. Bliss Co., Canton, Ohio, is now offering a complete plant-building service in the fields of rolling mills, can-



just what the doctor ordered . . .

Packaging is heir to more ills than the proverbial flesh. What was good, healthy packaging in yesterday's market may be a limping cripple in today's. The trick is to keep your packaging tuned to *today's* market . . . to the research findings that show what makes packaging sell.

And that's where *we* shine . . . we're right up to the minute in every phase of packaging—design, technique, machines, methods, and printing. Materials, too—we fabricate in film, foil, paper, laminates, glassine, parchment . . . virtually *every flexible material*.

If you feel your packaging needs a hypo . . . let's get together for a chat. Let us know when it's convenient for you.



neida

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Los Angeles, Cal. • Baltimore, Md. • Centra, Ill. • Sales Offices in Principal Cities



CONVERTERS AND COLOR PRINTERS OF QUALITY PACKAGING
from: Glassine, Cellophane, Polyethylene, Vinyls, Parchment,
Sulphite, Foil, Kraft, Waxed, Coated and Laminated Materials.

Creative Packaging for SALES IMPACT

Johnson & Johnson

eye-appealing,
easy-to-use
cutter-dispenser package for
BAND-AID Plastic Tape

TRADE MARK



Another Sales-Stimulating
Packaging Achievement
Produced by

DILLON-BECK
SPECIALISTS
in
PLASTIC PACKAGING
and
CUSTOM MOLDING

COMPLETE FACILITIES

for creating, designing,
and producing
"something special"
in packaging

- ★ DESIGNS & MODELS
- ★ MOLD & DIE CONSTRUCTION
- ★ MOLDING & ASSEMBLY of
THERMOPLASTICS
RANGING FROM 1 to 16 OZ.

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Designers • Molders of Plastic Products

1227 CENTRAL AVENUE
HILLSIDE, NEW JERSEY

Plants and people

making machinery and metal-working presses. The services were announced at the company's recent 100th anniversary celebration.

In line with the new research and development service now available to customers, R. A. Zuercher has been appointed sales and development engineer



Zuercher Goerig Lawlor

for the Foil Kraft Div. of Kaiser Aluminum & Chemical Sales, Inc., Chicago. Research phases of the Division's new service are being carried out under the direction of Mrs. Helen Goerig at the company's Spokane, Wash., facility.

Joe Lawlor and Mel Roach have been appointed plant manager and production superintendent, respectively, of Kaiser Aluminum's new aluminum foil processing plant now under construction at Belpre, Ohio.

Edward P. Stuart has been promoted to division manager of sales for the Can



Stuart

Div. of Crown Cork & Seal Co., Inc., Philadelphia. Robert J. Siebert has been appointed sales manager of the newly created eastern area and will be responsible for both the former northeast and southeast subdivisions. Fred Pinkerton is now sales manager of the Orlando, Fla., district. John C. McEver has been appointed a sales representative in the same area.

Universal Folding Box Co., Inc., Hoboken, N. J., has appointed Samuel Schapiro as chief purchasing agent.

Dec-Art Process Co., Inc., has opened a new, modern plant at 1704 Boone Ave., Bronx, N. Y.

Donald E. Focht has been promoted to assistant to E. E. Ellies, vice president for sales at Tee-Pak, Inc., Chicago.

John Newell has established a new counseling firm, John Newell Associates, with offices at 8 Huron St., Chicago. The firm will offer special service in the fields of public relations, marketing and sales promotion.

The executive and sales staff of Lord Baltimore Press, Baltimore, Md., are now located in the company's new quarters at 425 Park Ave., New York. This consolidates under one roof all customer

YOUR PRODUCT IN A
NIEMAND INDUSTRIES
PACKAGE . . .



practical,
profitable
. . . and
attractive



Do you need a tubular package that's durable, economical, easy to fill, handle and store—one that's attractively printed and handsomely styled with decorative papers or your label for effective, eye catching appeal?

You get every one of these features and lots more all in one package—if it's a Niemand Industries tubular package.

Manufactured to your exact specifications, Niemand Industries tubular packages come in a wide range of sizes, with many convenient closures of metal, paper or plastic—with shaker or sifter dispensers where needed.

Let us design a sample package for your line of products. There's no obligation, of course—write for detailed literature.

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*Manufacturers of
Paper Tube Products*

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Film of **TENITE POLYETHYLENE** helps "package" many items



Here's an ingenious use illustrating three properties of polyethylene that make it a valuable packaging material.

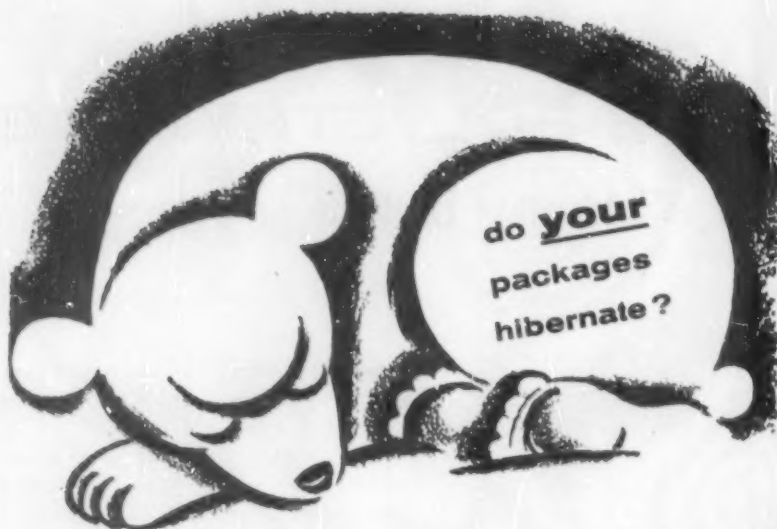
The young lady in the picture has solved the perennial vacation problem of how to keep household plants growing while the family's away. Her solution is to "package" them in bags or film made of Tenite Polyethylene.

The polyethylene, offering resistance to transmission of water vapor, insures that water will not escape. However, the polyethylene film is gas permeable, transmits oxygen and carbon dioxide, and permits the plant to "breathe." Finally, being transparent, the film lets the sunlight through.

Transparency, gas permeability and water resistance are important in many packaging applications. But Tenite Polyethylene offers still more advantages. It is heat sealable... chemically inert... doesn't puncture, tear or "run" easily... remains flexible at low temperatures. Small wonder, then, so many products now go to market dressed in Tenite Polyethylene.

Packaging men are finding many jobs for this Eastman plastic: waterproof and heat-sealable coatings for paper, film and foil... unbreakable bottles, boxes and jars... tough, clear or colored film. For more information on the packaging usefulness of Tenite Polyethylene, write EASTMAN CHEMICAL PRODUCTS, INC., subsidiary of Eastman Kodak Company, KINGSFORT, TENNESSEE.

TENITE
POLYETHYLENE
an Eastman plastic



Too many packages of fine products hibernate on the shelves because their packaging does not have the appeal required. For the finest reproduction for foil, paper, cellophane and paper board products . . . to attract purchasers . . . specify "ACME GRAVURE" cylinders.

We invite your inquiries.

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Using package inserts?

Call on Carey—the package insert specialists

Carey Press has the specialized know-how and the specialized equipment to handle every type of package insert job. Result: Carey customers get quick delivery of high quality work at low prices. Find out how 1/16" saved \$4,000 with Carey purchasing agent consultation.

round-the-clock operation
1, 2, 3, and 4 color printing presses
large and small runs
inventory roll stock with sheeting equipment
printing for special chemical tolerances

See for yourself. Get in touch with Arthur Friedman, Sales Mgr., and find out why so many leading companies "call on Carey" for their package insert jobs.



63 years
of achievement

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CAREY TRIAL RUN SERVICE
eliminates tie ups in your
packaging production line.

Carey Press will supply you with a quantity of blank stock, cut and folded to the exact size of your package inserts, for testing on your automatic inserters and other packaging production equipment. That way you're sure you can handle the job before you give Carey the go ahead.

Plants and people

services including package engineering, creative art, package construction and production and advertising.

Lord Baltimore Press has purchased a site in Clinton, Iowa, for the construction of a new folding box and label plant.

Walter O. Simon has been appointed assistant general manager of the Film Dept. of E. I. du Pont de Nemours & Co., Inc., Wilmington, Del. He replaces Arlington Kunsman, who has retired after 41 years with the company. Dr.



Simon Spanagel

Edgar W. Spanagel succeeds Mr. Simon as director of production of the Film Dept. Emil B. Ichla, sales specialist in the converter sales section, and A. W. Shaffer, a packaging expert and sales consultant, both of the Film Dept., have also retired.

Walter C. Granville, formerly assistant director of the department of design at Container Corp. of America, has established an independent practice as color consultant. He will locate at 1337 W. Fargo Ave., Chicago.

The Central Packaging Div. of Fibreboard Paper Products Corp., San Francisco, has appointed Floyd L. Garlock as manager of the graphic design section and Ernest C. Pellaton as manager of the structural design section.

William Crimmin has been appointed product manager for extrusion coatings by Ludlow Papers, Inc., Needham Heights, Mass. He will represent the firm's packaging, building and fine papers divisions.



Royce Conant

Mark B. Royce and Roger P. Conant have been appointed product managers for fruit and produce in the east and southwest districts, respectively, for the Gair Fibre Drum & Corrugated Box Div. of Continental Can Co., New York.

Garfield Box Co., Passaic, N. J., has agreed to discontinue the production and sale of set-up boxes and hand over the business it now conducts to Niagara Box Co., Inc., Fair Lawn, N. J. Finished goods and raw materials have also become the property of Niagara. Mortimer M. Weber, manager of the former Garfield Box Co., has joined Ni-



whatever the job . . .

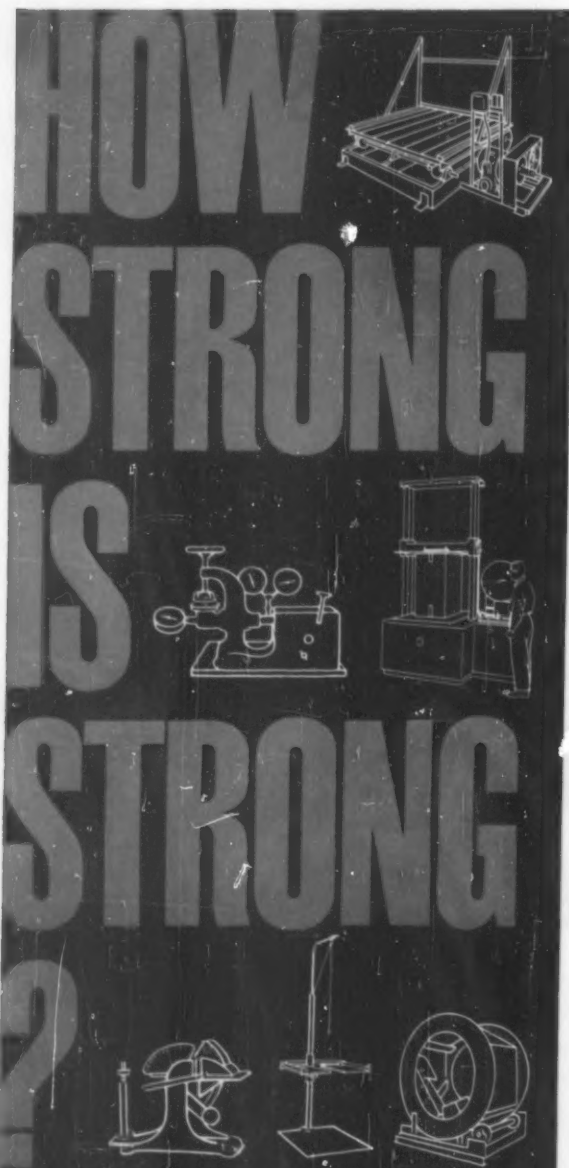
SELF-STICKING
PERMACEL[®] TAPE

PERMACEL

LEPAGE'S

products

Permacel Tape Corporation, New Brunswick, N. J. • a Johnson-Johnson company



Don't buy or sell boxes, cartons or any shipping containers unless they are tested for strength by a TMI package tester.

This will avoid any loss of your time or money and will assure you that your product arrives in perfect condition.

TMI, well-known for testing instruments, carries a complete line of testers such as: Compression, Vibration, Revolving Drum, Conbur, Puncture, Drop and all other testers for component parts. These instruments are reasonably priced, highly accurate, easy to operate and cost little to maintain.

All technical specifications are met. Write today for our PACKAGE TESTING Catalog and find out how your package can be made to "take it."

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Manufacturers and Distributors for over 30 years



PRINTING PLATE MATERIALS

Finest Printing Results with "U.S." Unvulcanized Rubber

thanks to
"U.S." TO YOU
Refrigeration



The special refrigeration practices of U. S. Rubber provide "portal-to-portal" assurance against premature "setting up"... guarantee quality control of "U. S." unvulcanized rubber from calender to customer... mean that when you buy "U. S." you buy the best.

For quick and complete service on your rubber plate problems, contact Williamson & Co. who carry a complete stock of U. S. Rubber printing plate materials at these convenient warehouses:

CALDWELL, N. J. • BRYAN, OHIO • SAN MATEO, CALIF. • GRIMSBY, ONT.
...or contact us direct at Providence, R. I.



Mechanical Goods Division

United States Rubber

Plants and people

agara Box as an account executive. Many other employees of the former company have been engaged by the Niagara Box Co.



Dearborn

Paul Dearborn has been appointed to the newly created post of director of packaging markets for Reynolds Metals Co., Louisville, Ky. Mr. Dearborn, who has been with Reynolds since 1950, will direct efforts to step up operations to meet the expanding packaging industry. Before joining Reynolds, Mr. Dearborn was associated with the W. W. Bevan Co. and H. D. Catty Corp.

James K. Brahe has joined Westfield River Paper Co., Inc., Russell, Mass., as midwestern sales representative.



Gausa



Wilson

Container Corp. of America, Chicago, has appointed Joseph H. Gausa as general sales manager of the flexible packaging division. Haldane Y.

Wilson, former manager of the company's Chattanooga, Tenn., folding carton plant and paper mill, has been named general manager of both operations.

Charles V. Nicholson has been named general sales manager and Joseph H. Walter is now manager of engineering for the Embart Mfg. Co., Standard Knapp Div., Portland, Conn.

John McDevitt has been named vice president of Lippincott & Margulies, industrial designers, New York.

Oneida Paper Products, Inc., Clifton, N. J., has appointed Salvatore A. Russo to its Los Angeles sales office.



Kohler

Gerard W. Kohler has been appointed sales engineer in the New York district office of Arthur Colton Co. of Detroit. Mr. Kohler will handle sales of Colton high-speed rotary tableting equipment, filling machines, tablet press punches and dies, and other allied equipment.

Reinecke & Associates, industrial and package design firm of Chicago, has appointed Rene Burvant as director of packaging and graphics.

Rhineland Paper Co., Rhineland, Wis., recently assigned Robert E.

Here are the LOW-COST answers to YOUR labeling problems!

whatever you need...
AVERY LABELING will
save you time and money



See the difference
with

AVERY
PRESSURE-SENSITIVE
LABELS

Avery pressure-sensitive Labeling offers you a new approach... an easier and *better* solution... wherever you need to code, identify, instruct, warn, route or inspect. It's the modern low-cost method of labeling to do the job quickly and efficiently. Avery Labels can be designed and produced in the exact size, shape and color you need... individually die-cut on sheets or rolls for manual or automatic labeling!

1. NO MOISTENING—EASY TO APPLY

One simple motion—a fingertip pressure—and Avery Labels are on in an instant—without moistening! No waste motions in handling or sorting loose labels—no messy gluing or wetting.

2. STICKS TO ANY CLEAN, SMOOTH SURFACE

Metal, plastic, glass, cellophane, metallic paper, pliofilm, polyethylene, ceramics, wood... and many other surfaces... are being easily and quickly labeled every day with Avery pressure-sensitive Labels.

3. NEAT, SMART APPEARANCE

Will not pop, peel or curl even under extremes of temperature and humidity—even stay neat and attractive with rough handling.

4. SPEEDS PRODUCTION

In all industries... in hundreds of ways... Avery Labels are saving time, labor and money every day. Avery Labeling is geared to *your own* type of operation—either fast, production line speed or intermittent labeling.

5. THEY'RE PRICED RIGHT

In terms of economy and improvement, actual case histories prove that Avery Labeling is the most economical method you can use in your production operations.

AVERY ADHESIVE LABEL CORP., Div. 127

117 Liberty St., New York 6 • 608 S. Dearborn St., Chicago 5 • 1616 S. California Ave., Monrovia, Calif. • In Canada, 48 Hogg Road, Toronto 13, Ontario • Offices in Other Principal Cities

I am interested in labeling

- ☐ Please send samples and information
☐ Have the Avery man call

Name _____

Company _____

Address _____

City _____

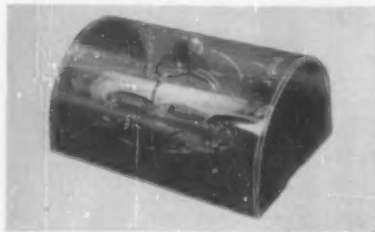
Zone _____ State _____

Write for **FREE** sample labels,
case histories

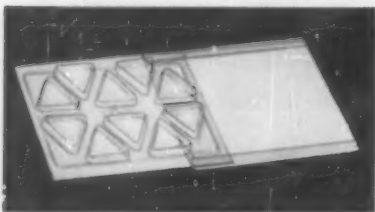
New IDEAS IN TRANSPARENT PACKAGING FOR BETTER SALES ...



A striking and attractive blister package adopted by W. R. Sweeney for rubber baby spoons. It displays, protects, adds sales appeal . . . automatic sealing assembly.



A luxurious "quonset" style acetate box designed for Modern Forge Mfg. Co., Inc. added glamour to the merchandise, created new interest, skyrocketed sales.



A novel idea in packaging carbide tips introduced by Vascoloy-Ramet Corp. pointed to the versatility of the "slide-pack". Protects individual parts, permits easy identification and selection.

We invite your inquiries
on your packaging problems

Plastic Container Division

Plastofilm INC.

914 WEST UNION AVENUE, P. O. BOX 531,
WHEATON, ILLINOIS
REPRESENTATIVES IN ALL PRINCIPAL CITIES

Plants and people

O'Brien to its Atlanta, Ga., sales office. He will cover South Carolina, Georgia, Florida, Alabama as well as parts of Tennessee.



Cochran

Harold W. Cochran has been elected vice president in charge of sales for Caspers Tin Plate Co., Chicago. Mr. Cochran was formerly manager of sales and has been associated with Caspers for 19 years in various sales capacities. The firm has two subsidiaries, the Olive Can Co. and the Century Display Mfg. Co.

Raymond Spilman, industrial designer, New York, has set up a separate packaging department under the direction of David Wurster. Mr. Wurster will be assisted by Pierre Gauvin and Stewart Roberts.

Harvey Weiss, secretary of the company, and Stuart L. Stern, vice president, have been elected directors of Stern Can Co., Inc., Boston, Mass.

The Pfaudler Co., Rochester, N. Y., has engaged Harold A. Ruffhead as sales representative in the midwest for the dairy, food and machinery department.

Radio Receptor Co., Inc., New York, has been acquired by the General Instrument Corp. of New Jersey.



Beltz

A. G. Beltz has been appointed to the position of general sales manager of Brockway Glass Co., Brockway, Pa. He replaces James A. Giddings, who has been transferred to the sales staff in the New York City territory. Mr. Beltz has had more than 30 years experience in the field of glass container sales.

Albert LaSalvia has been appointed sales representative for the east and midwest by George H. Fry Co., Mineola, N. Y.

Jesse H. Lide has joined the Client Service Dept. of Donald Deskey Associates, New York.

The New York City office of W. Braun Co., Inc., is now located at 47 W. 34 St., New York 1.

The plastics sales department of Celanese Corp. of America, New York, is now located at 744 Broad St., Newark, N. J. Other departments of the Plastic Div. in Newark will remain at 290 Ferry St.

Thomas M. Gopsill, Jr., and Irvin G. Murray have been appointed as sales representatives for the Box Div. of The



MARKED IMPROVEMENTS IN IDENTIFICATION AND DECORATION

Now you see it, now you don't . . . sometimes characterizes marking done on Markem machines. This isn't a problem of fading, or wear and tear (our "Ink Lab" takes particular pains to see to that). Rather, it's where the marking shouldn't show normally, or where it's used only during manufacturing. An example of the first is putting a trademark on eyeglass lenses, using our 70AB machine and special "breath image" ink which is, as you might expect, visible only when breathed upon. The second type of "now you see it" marking is illustrated by production control numbering of radio tubes with a Markem 45AG machine, instead of hand stamping them. Numbers are removed and replaced by a trademark imprint when tubes are completed. Thus even "temporary" marking, done the Markem way, can be useful.



Seven come eleven, and other games . . . like the sporting goods story told here previously, are all part of "industry's marking requirements." They

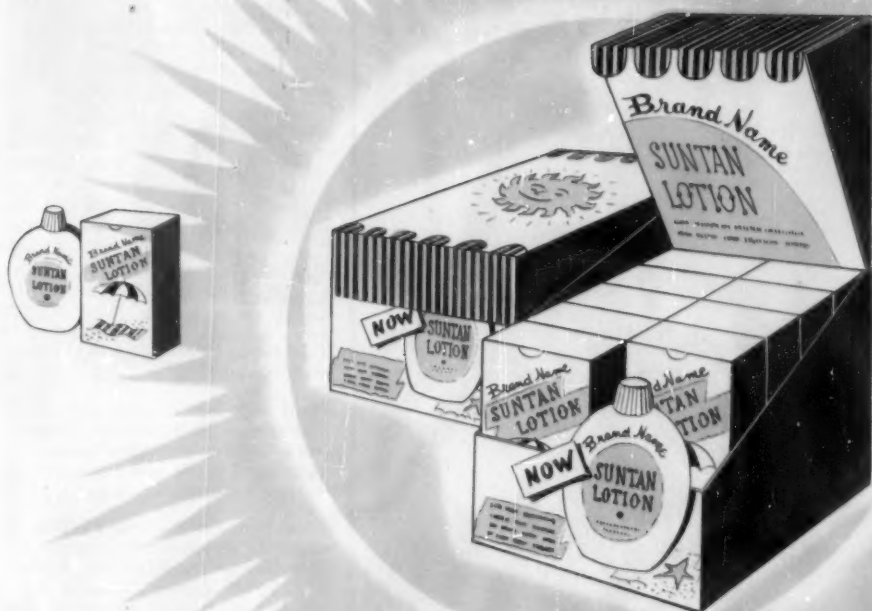
also show how Markem sees the job through, from machine to final mark. Using a standard 25A machine, with special fixtures suggested by Markem, one manufacturer is now printing one side of 15 dice at a time. Compared to leaf stamping them individually, the Markem method has cut costs and boosted output tremendously — resulting in a second machine order. A similar business is running up their score, printing game tiles 132 at a crack with a special 25A. Whether your business is games, drugs, electronics, textiles, shoes or another field — your marking problems have answers at Markem.

From Belgium to Brazil . . . languages, customs and clothes may be different, but all share a common requirement for identification/decoration marking. Take pharmaceutical houses: in Chicago, New York and other U. S. locations . . . in Panama, Belgium, Brazil, Turkey and other spots around the world, Markem 45AE machines are imprinting batch and date codes on small cartons for drug items. Wherever your business is located, and whatever your marking needs, it may well pay you to see what Markem can offer. Ways to mark products, parts, packages — for decoration, identification or control — have been Markem's business for almost 50 years. Some good answers have been developed in that time — some that probably can help you.



When writing, state size, shape, material of item to be marked; rate needed, color requirements, etc. Include sample if possible. This saves time, insures the right machine and method for your job. Markem Machine Co., Keene 1, N. H.

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#90 ULTRAGLOSS has a remarkable effect on sales, so much so that its cost is recovered many times over by the manufacturers who are choosing it for drug products, toiletries, beauty aids, beverages and many other items... in both regular and gift cartons.

Creative Ideas and Practical Packaging Advice Free for the Asking!

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STANDARD COATED (fine machine coating) • **METALLIC COATED** (bright, foil-like) • **POLYETHYLENE COATED** (protective barriers)

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easier to pour
easier to close
better to store**

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For details, contact

SEAL SPOUT Corp.

MOUNTAINSIDE, NEW JERSEY



Plants and people

Warner Bros. Co., Bridgeport, Conn. Mr. Gopsill will work from the New York office, while Mr. Murray will headquarter in Bridgeport.



Nichols Barlow



Albert B. Nichols, Jr., and Gordon Barlow have been appointed sales manager and assistant sales manager, respectively, of the tube division of Sun

Tube Corp., Hillside, N. J., a subsidiary of American Can Co.

Floyd W. Clark has succeeded J. A. White, Jr., as manager of the Richmond, Va., sales office of Chase Bag Co., Chicago. Mr. White is now manager of the company's Dallas, Tex., branch.

Harold A. Smith, vice president in charge of manufacturing, reports that The Hamersley Mfg. Co., Garfield, N. J., maker of glassine and greaseproof papers, has completed an over-all plant modernization program in which new corrosion-resistant piping has been installed, beaters and other equipment rebuilt and modernized, and provision made for automatic control of stock. The new equipment is now in full-scale operation.

William A. Foran, Jr., has been named central district sales manager for kraft paper and bags by the Forest Products Div. of Olin Mathieson Chemical Corp., New York.

Marathon Corp., Menasha, Wis., has appointed Jack Clinnin to the new post of end-label merchandiser for the Bakery Packaging Dept.

Executive, sales and administrative offices and plant operations of National Metal Edge Box Co., formerly in Philadelphia, are now located at Barrington, N. J.

General Foods Corp.'s Central Laboratories has changed its name and address to Research Center, 555 S. Broadway, Tarrytown, N. Y.

Robert J. Neale has been appointed director of public and industrial relations for The Ottawa River Paper Co., Toledo, Ohio.

Fulton Bag & Cotton Mills, New Orleans, La., has sold its Kansas City, Kan., textile bag factory to the Pioneer Bag Co. of Kansas City.

The Wyomissing Glazed Paper Co. and its wholly owned subsidiaries, Reading Glazed Paper Corp. and The United Mfg. Co., are to merge with The Nar-

row Fabric Co., all of Reading, Pa. Operations of the three paper companies will be conducted under the name of Wyomissing Paper Products Div. of The Narrow Fabric Co. No change of personnel is contemplated.



Hanlon

Joseph F. Hanlon has joined American Cyanamid Co., New York, as manager of package development for the Farm & Home Div. He will be responsible for package design and creation for all the division's products. Mr. Hanlon was formerly in charge of packaging for Johnson & Johnson, New Brunswick, N. J.

M. Don Lyons has been appointed director of market research for Sun Chemical Corp., Long Island City, N. Y. Weldon R. Coate has been made general manager of Sun Chemical's General Printing Ink Div. in the midwest. He will headquarter at Clearing, Ill.

J. B. Dove & Sons, Inc., Philadelphia manufacturer of heat-sealing equipment, has moved its plant and office to new and larger quarters at Amber and Westmoreland Sts., Philadelphia.

H & R Industries, custom extruders and molders, Nazareth, Pa., have announced the appointment of James W. Simmons as sales manager.

Philip Libson, manager of the project development division of Max Factor & Co., will lecture for a course in creative packaging of consumer goods, to be offered by the University of California for fall enrollment. The course, to be held at the University Extension Los Angeles Center, is designed for persons in the packaging industry and is intended to stimulate their thinking toward the development of better packaging.

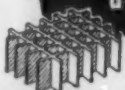
The Fluid Chemical Co., Newark, N. J. has appointed J. J. DeCarlo to the newly created post of plant coordinator. Mr. DeCarlo will have over-all supervision of production and planning the development of the company's new contract packaging facilities and will organize its new aerosol filling lines. Named to replace Mr. DeCarlo as director of purchases for Fluid Chemicals is Richard D. Marzane, Jr.

Appointment of Benjamin D. Berk as sales engineer for Texas, Oklahoma, Arkansas and Louisiana has been announced jointly by Simplex Packaging Machinery Div., Oakland, Calif., and Hudson-Sharp Machine Co., Green Bay, Wis., both operating components of Food Machinery & Chemical Corp. He will headquarter in Dallas, Tex.

Emil N. de Bastos, president of the Resina Automatic Machinery Co., Inc., Brooklyn, died June 14 after a long illness. He was 55. He joined Resina in 1940 and was always actively associated with the packaging industry.

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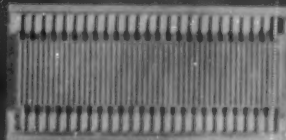
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PA-112

For your information

Robert E. Novy of The Wood Shovel & Tool Co. has been elected chairman of the newly formed **Hardware Packaging Committee** of the Packaging Institute. L. D. Connell of J. Wiss & Sons was named vice chairman and F. S. Haniewicz was chosen secretary. Merchandising interest of the group is evidenced by the formation of its first subcommittee to consider "Design of Hardware Packages for Self Service," chairmanned by Mr. Connell.

A. R. Schaefer of New Jersey Machine Corp., newly elected chairman of PI's Machinery Division, held an organizational meeting of his executive committee recently at which **Byron Kingery** of Lederle Laboratories Div., American Cyanamid Co. was named vice chairman. Three special-interest committees were also established. **Ira Gottscho** of Adolph Gottscho Co. was named chairman of the Machinery Suppliers Committee, to be assisted by vice chairman **Ed Brooks** of Scandia Mfg. Co. **Tom Smith** of Pharmaceuticals, Inc., was selected chairman of the Machinery Users Committee, to be aided by **Hugh Lyons** of Morck Sharp & Dohme as vice chairman. **Stan Thomson** of Robert Gair Div., Continental Can Co., was elected chairman of the Materials Suppliers Committee, assisted by **Ralph Schlienz** of Riegel Paper Co. as vice chairman. Technical personnel interested in these special-interest areas are invited to get in touch with the officers of the Machinery Division, which will hold its next meeting in September.

The Bag Committee of the Packaging Institute has announced the availability of a Proposed PI Test Procedure entitled "Testing the Roughness or Smoothness of Flat Kraft Paper for Multiwall Bags." Copies are available on request to the Packaging Institute, 342 Madison Ave., New York 17, at 25 cents each.

The Industrial Designers' Institute has moved to new and larger offices at 441 Madison Ave., New York 21.

A study group has been appointed to appraise the need for standards, tests and a permanently organized committee dealing with flexible packaging materials, according to the **American Society for Testing Materials**. **John M. Cowan**, National Flexible Packaging Assn., is chairman of the study group. Other members are **G. E. Falkenau**, **G. M. Kline**, **T. R. Major**, **A. B. McKee**, **Julius Pinsky**, **H. R. Snoke**, **L. F. Sweet**, **W. B. Tibbets**, **G. H. Harnden** and **L. C. Gilbert**. Mr. Gilbert of the ASTM staff is acting secretary.

A new "Competition Manual" giving revised rules and regulations of the 1957 **National Championship Industrial Packaging and Materials Handling**

Competition, to be held Oct. 28-31, Convention Hall, Atlantic City, is available from the **Society of Industrial Packaging and Materials Handling Engineers**, sponsor of the event. The nine-page booklet contains tear-out entry forms and tells how to submit entries in the competition, which is to be held in conjunction with the **National Industrial Packaging & Handling Exposition** of 1957. Copies of the Competition Manual may be had on request to the **SIPMHE Championship Competition**, 111 W. Jackson Blvd., Chicago 4.

The **Folding Paper Box Assn.** has named **Perry L. Smithers**, formerly manager of the office of public information at the University of Illinois, as director of public relations.

Frederic Remington of Peerless Tube Co. was elected president of the **Collapsible Tube Mfrs. Council** at its recent semi-annual convention. New directors are **Mr. Remington**; **James M. Rich**, Aluminum Co. of America; **Werner R. Rentschler**, Art Tube Co., Inc.; **Charles Kleinbeck**, Atlantic Mfg. Co.; **Joseph C. Steiner**, Atlas Collapsible Tube Co.; **William Schroeder**, Michigan Collapsible Tube Co.; **Louis H. C. Hantoon**, National Collapsible Tube Co.; **L. Tracy Sheffield**, Sheffield Tube Corp.; **J. H. Heideger**, Standard Collapsible Tube Co.; **Kenneth M. Leghorn**, Sun Tube Corp.; **John E. Turner, Jr.**, J. S. Turner White Metal Co.; **Victor Muscat**, Victor Industries; **A. W. Paull, Jr.**, Wheeling Stamping Co.; **Hubert Richter**, White Metal Mfg. Co., and **Mark K. Dresden** of A. H. Wirz, Inc.

More than 600 persons attended the recent **Eighth Coating Conference** sponsored by the **Technical Assn. of the Pulp and Paper Industry**. Theme of the event was the manufacture and processing of coated paper and paperboard. Next year's conference, which will consider coating formulations, was set for May 14-16, Bedford Springs Hotel, Bedford Springs, Pa. Those wishing to present papers are requested to contact the program chairman, **E. R. Padavic**, Container Corp. of America, 10 N. Clark St., Chicago 3.

The Office of Technical Services, U. S. Dept. of Commerce, has announced the availability of report PB 121893, "Permeability of Barrier Materials to Volatile Corrosion Inhibitors at Various Humidities," by **A. S. Mohaupt** and **J. P. Hohf**, Forest Products Laboratories. The 90-page report is based on research conducted for the Air Force, Wright Air Development Center. Aluminum foil barriers were found most efficient for retaining VCI and thus most suitable for long-term storage. Copies of

the report may be ordered at \$2.25 each from the Office of Technical Services, U. S. Dept. of Commerce, Washington 25, D. C.

A full-color, 15-min., 16-mm. motion picture illustrating the operation of the **Andre-Matic Multi-Pak** machine has just been made available by **The Lord Baltimore Press**, which is licensed to produce Andre-Matic Multi-Pak can carriers for beer or other canned products and to sell or lease Andre-Matic packaging machines in the eastern area. Inquiries on the film should be directed to **Morton Dukehart**, multi-unit packaging product manager, The Lord Baltimore Press, 425 Park Ave., New York, who will arrange for its presentation.

The **National Paperboard Assn.** has elected **J. C. Mulholland** of Crosssett Paper Mills a member of its board of directors. **O. C. Majors** of the Fibreboard Paper Products Corp. has been elected chairman of the association's Special Food Board Group.

The first quarter century of Tenite plastics production is being celebrated this year by **Eastman Chemical Products, Inc.**, subsidiary of Eastman Kodak Co., New York. Projects which will com-

What's doing

Aug. 25-28—**Third Annual Fancy Food & Confection Show**, Sheraton Astor Hotel, New York.

Aug. 25-30—**New York Gift Show**, Hotel New Yorker, New York.

Aug. 29-31—**American Pulp & Paper Mill Superintendents Assn.**, New York-Canadian Div., fall meeting, Saranac Inn, Upper Saranac Lake, N. Y.

Sept. 8-11—**National Frozen Food Distributors Assn.**, annual convention and exhibition, Hotels Sherman and Morrison, Chicago.

Sept. 10—**Packaging Institute**, Development of Corrugated Containers Subcommittee, Commodore Hotel, New York.

Sept. 15-18—**Produce Packaging Assn.**, seventh annual conference and exposition, Shoreham Hotel, Washington, D. C.

Sept. 16—**Chemical Specialties Mfrs. Assn.**, general luncheon, Commodore Hotel, New York.

Sept. 24—**Packaging Assn. of Canada**, point-of-purchase seminar, Royal York Hotel, Toronto, Canada.

Sept. 26-29—**National Flexible Packaging Assn.**, fall meeting, Greenbrier Hotel, White Sulphur Springs, W. Va.

Sept. 30-Oct. 4—**American Materials Handling Society**, first Canadian material-handling show and conference, Show Mart, Montreal, Canada.

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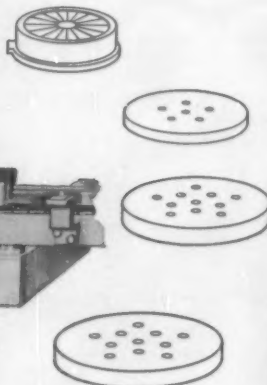
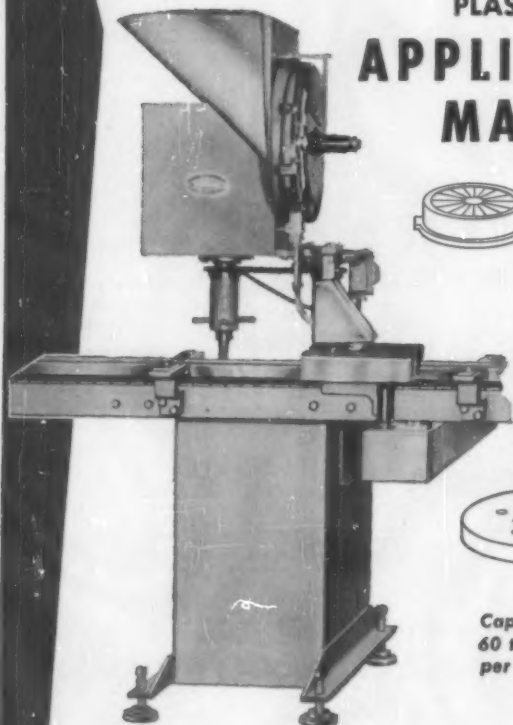


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memorate the event include a medallion molded in butyrate plastic depicting one of the first injection molding machines produced in the U. S.; a new color movie, "Portrait in Plastics," and the inauguration of a new color publication, *Tenite Plastics Views*.

Eastman Chemical's food laboratories have revised the various analytical procedures available for analyzing phenolic food-grade antioxidants. They are presented in a 16-page brochure "Analysis of Phenolic Antioxidants," available from Eastman Chemical Products, Inc., Kingsport, Tenn.

Francis Blake of Canaan, N. Y., is the first winner of the Columbia Box Board Mills Foundation scholarship established by Columbia Box Board Mills, Inc., Chatham, N. Y.

The Permacel Tape Corp., a Johnson & Johnson company, recently celebrated its Silver Jubilee at the company's main plant in New Brunswick, N. J. The company first started making tape 25 years ago and now produces more than 400 different tapes and other products.

Exhibit space for the Packaging Machinery & Materials Exposition of 1958, scheduled for Atlantic City, March 25-28, was selected by 120 companies recently. The exposition, sponsored by the Packaging Machinery Mfrs. Institute, will occupy 60,000 sq. ft. of space.

Tee-Pak, Inc., 3250 S. Morgan, Chicago, is making available to meat packers a full-color, sound movie designed to sell hot dogs and other food products at drive-in theatre refreshment stands. It was especially prepared for National Hot Dog Month, being observed this month. The film can be adapted to include individual packer identification and can be edited for use on television.

A new book of interest to the plastics-packaging field is, "Polythene: The Technology and Uses of Ethylene Polymers" (Hiffe & Sons, Ltd., London, England; \$18.50), edited by Archie Renfrew of Imperial Chemical Industries, Ltd., and Phillip Morgan, editor of *British Plastics*. Thirty-eight specialists from Great Britain and the United States have contributed chapters in their own specialized fields. The book is available in the United States from British Publications, Inc., 30 E. 60 St., New York 22.

How to cut costs, simplify packing and improve efficiency in the packaging of heavy products are subjects discussed in a new edition of "How to Ship Heavy Products in Corrugated Boxes," recently published by Hinde & Dauch. Copies of the 28-page, illustrated booklet, No. 12 in the H & D Little Packaging Library series, may be obtained from Hinde & Dauch, Sandusky, Ohio.

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REUSABLE PLASTIC CONTAINER. Illustrated literature describes line of jar-type transparent plastic containers with patented, leak-proof closures. Gives specifications and illustrates variety of stock shapes and sizes with 6 to 18 oz. capacities. Buckeye Molding Company. (H-751)

PROTECTIVE PACKAGING MATERIAL. Illustrated folder describes "Packit," a cotton wadding, suitable for cushioning, surface protection. Available in sheets, rolls, or fabricated for specific use. The Stearns & Foster Co. (H-752)

INDUSTRIAL SCALES CATALOG. Illustrated folder describes and lists capacities of extensive line of industrial scales, including floor, overhead track, hopper, bench and portable types. Toledo Scale Company. (H-753)

FUSING AND DRYING MACHINES. Illustrated catalog describes line of curing, fusing and drying equipment for processing coated web stocks. Machines are suitable for fusing vinyl coatings, drying coatings and lacquers, removing solvents. F. C. Dawson Engineering Company. (H-754)

PLASTIC BOXES. Illustrated literature diagrams compartmented and un-compartmented styrene containers with hinged openings. Shows stock patterns available. Colonial Moulded Plastics Co., Inc. (H-755)

GRAVURE ROLLS. Illustrated folder shows diagrams of fixed, through, and removable shaft, gudgeon, continuous taper, double taper type gravure printing rolls, manufactured by this Massachusetts company. Magnat Machinery & Pattern Corp. (H-756)

FILLING PLASTIC TUBES. Illustrated literature describes machine that fills and seals plastic tubes from 1½ to 9 in. length. Includes specifications. A & M Tool & Die Co., Inc. (H-757)

RUBBER PRINTING PLATES. Illustrated folder shows line of machines for making rubber plates for flatbed and rotary printing. Includes specifications. American Evatype Corporation. (H-758)

REINFORCED PAPER. Description of "Scrimtex," company's paper that is reinforced with fiberglass scrim, and suitable for case liners, wrapping, bags, is printed on sample paper stock. Moosene Paper Mills Co. (H-759)

PRESSURE-SENSITIVE TAPE. Data sheet describes waterproof pressure-sensitive cloth tape for exterior packaging and sealing application. Includes specifications chart. Johns-Manville. (H-760)

LIQUID UNIT PACKAGES. 8-page illustrated booklet describes machine that forms unit packages in sizes up to 4½ x 4½ in., then fills them with liquids and viscous materials. Brown Bag-Filling Machine Company, Inc. (H-761)

PACKAGING MEAT AND POULTRY. Illustrated folder discusses the advantages of packaging meat and poultry products in polyethylene film. Includes case histories, testimonials. Bakelite Company. (H-762)

FOIL-COATED PAPER SAMPLES. Sample folder contains display of plain and embossed foil-coated paper in a wide variety of colors. Louis Dejonge & Co. (H-763)

PLASTIC PACKAGING MANUFACTURERS. Booklet contains geographical listing of molders and fabricators recommended by this company for manufacturing plastics packages from company's styrene, cellulose acetate, and polyethylene. Monsanto Chemical Company. (H-764)

FOIL CONTAINER CATALOG. 8-page illustrated catalog provides specifications and descriptions of round and rectangular foil containers, foil trays, pans, pie plates. Kaiser Aluminum & Chemical Corporation. (H-765)

TRANSPARENT SHEET. Folder contains detailed properties chart for company's cellulose acetate, cellulose acetate butyrate, cellulose triacetate transparent sheet for containers, envelopes, boxes, laminations, display items. Eastman Kodak Co., Cellulose Products Div. (H-766)

WRAPPING PACKAGES. 12-page booklet describes line of automatic machines that wrap products or packages of varying shapes in films, foils, or papers. Illustrates parts used in change-over operation. Wrap-King Corporation. (H-767)

PAPER FOR OFFSET. 48-page booklet shows quality of reproduction possible on company's offset paper. Includes multi-color label stocks and sample paper printed with black and white, color halftones. S. D. Warren Co. (H-768)

MULTIPLE CAN CARTONER. Illustrated folder describes machine that forms and loads 6-pack cartons. Handles up to 32 oz. capacity cans at speeds over 650 cans a minute. Currie Packaging Company. (H-769)

TYPOGRAPHY FOR PRINTING AND RUBBER PLATES. Illustrated booklet describes the Ludlow System of typography for use in letterpress printing and in the manufacture of rubber printing plates. Ludlow Typograph Company. (H-770)

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FILM PACKAGING OF PRODUCE. 16-page illustrated booklet gives step-by-step guidance to food retailers in setting up a produce pre-packaging system in retail stores. Lists cellophane and polyethylene bags made by this company, shows loading and sealing equipment. The Dobeckmun Company. (H-771)

ROLL-LEAF STAMPING PRESSES. Illustrated folder describes line of heavy-duty roll-leaf stamping equipment for items from 1/2 to 24 in. high. Includes specifications and illustrations of accessory equipment. Olsenmark Corporation. (H-772)

ROUND CONTAINER LABELING. 6-page technical bulletin discusses factors involved in the selection of adhesives for labeling round metal and glass containers. Discusses suitability of company's adhesives for this type of labeling and suggests proper equipment to be used. Paisley Products, Inc. (H-773)

CARTONERS AND WRAPPERS. 40-page catalog gives details on the design, construction and uses of an extensive line of cartoning, wrapping and wrapping-cartoning machines. F. B. Redington Co. (H-774)

EDGE POSITION CONTROL. Illustrated folder diagrams operation of a photoelectric edge guidance system said to operate at accuracy of 1/32 in., at any speed. Intercontinental Dynamics Corporation. (H-775)

LABELING MACHINE. Illustrated folder contains diagrams of semi-automatic unit that applies thermoplastic-coated labels of 1/2 x 1/2 in. to 6 x 5 in. sizes to a wide variety of container types. Also shows automatic units. New Jersey Machine Corporation. (H-776)

METALLIC-COATED PAPER SAMPLES. Sample booklet contains swatches of embossed and plain metallic-coated papers and shows line and halftone printing on paper. Nashua Corp. (H-777)

PACKAGING MACHINERY. Illustrated literature presents line of bundling, banding, and wrapping packaging machinery. Scandia Manufacturing Company. (H-778)

BOXBOARD SAMPLES. Samples of company's coated board for folding boxes in .016 to .024 thicknesses are available from this company. The Champion Paper and Fibre Company. (H-779)

ALUMINUM CLOSURES. Illustrated catalog describes line of aluminum closures for bottles, jars, vials, and also describes line of hand-operated semi-automatic machines for applying these closures. Aluminum Company of America. (H-780)

MACHINERY FOR BOXES. Illustrated folder describes, gives specifications for machinery for folding and set-up boxes, such as gluers, wrappers, dewaxers, printing presses. E. G. Staude Manufacturing Co., Inc. (H-781)

FROZEN FOOD WRAPPER. Illustrated folder contains specifications and diagram of floor plan of wrapping machine that handles up to 100 standard-size frozen food cartons a minute. Wraps cellophane, hi-gloss wax papers, laminated foil, etc. Package Machinery Company. (H-782)

VINYL FILM SAMPLE. Sample sheet of vinyl film is attached to folder that describes applications, provides physical and chemical properties, lists prices and available thicknesses of the film. Clorpy Corporation. (H-783)

WEIGHER-FILLER. Illustrated folder shows semi-automatic unit that weighs and fills fragile, free-flowing, semi-free-flowing products into bags, boxes, jars and cans. Wright Machinery Co. (H-784)

GLASSINE PAPER SAMPLES. Folder containing sample swatches of grease-proof and white and colored glassine paper is available from this company. The Hamersley Manufacturing Co. (H-785)

MOLDED PLASTIC BOXES. Catalog folder describes extensive line of clear, rigid molded plastic boxes in oval, compartmented, rectangular, hinge-top shapes. Tri-State Plastic Molding Co. (H-786)

RUBBER PLATE HANDBOOK. Manual for flexographic printers contains guidance on ordering, mounting, using, proofing, and protecting rubber printing plates. Moss-type Corporation. (H-787)

CONTAINERS FOR SMALL ITEMS. Booklet discusses the advantage of using plastic vials for packaging small, hard-to-handle items, such as pills, powders, small machine parts, cosmetics. Lusteroid Container Company, Inc. (H-788)

PRINTING OF TAPES. Illustrated folder discusses rotary printing machines for printing kraft, foil, metallic, pressure-sensitive, gummed, ungummed, cloth tapes in one or two colors. John McAdams & Sons, Inc. (H-789)

STOCK PLASTIC BOXES. Illustrated folder shows patterns available for line of transparent rigid plastic compartmented and un-compartmented rectangular and oval hinged boxes. The Vlcchek Tool Company. (H-790)

PRE-PRINTED LABELS. Catalog folder contains illustrations and prices for company's pre-printed and blank pressure-sensitive labels suitable for price marking. Paramount Paper Products Company. (H-791)

MULTI-UNIT CAN LOADER. Folder describes automatic unit that bands two, three or four cans together, and loads at speeds up to 50 cartons a minute. Provides mechanical data. Container Corporation of America. (H-792)

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U. S. patents digest

This digest includes each month the more important patents of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps not accepted. Edited by H. A. Levey.

Method of Making Valve Bags, Marion D. Burrell (to Crown Zellerbach Corp., San Francisco, Calif., a corporation of Nevada). U.S. 2,791,160, May 7. The method of forming a multi-ply valve bag wherein several webs of bag stock are passed through a tuber simultaneously, which comprises introducing a web of valve stock between two webs of the bag stock and feeding it through the tuber therewith.

Infusion Packages, Louis Barnett (to National Tea Packing Co., Inc., Long Island City, N.Y., a corporation of New York). U.S. 2,791,505, May 7. A Siamese-twin infusion package constructed and arranged for use as a single whole, comprising a sectioned body portion convertible into a twosome of half-part units, strand handle members and a divisible tag mounted to terminate said handle members.

Compartmented Package, Herbert Dow Knoop, et al., Cincinnati, Ohio. U.S. 2,791,324, May 7. A compartmented container comprising a pair of facing sheets, three compartments defined by said sheets and a series of four tear lines extending through the edges of said compartments, wherein each of said tear lines is located along a different edge of the container.

Bottle Closure, George T. Franck, Inglewood, Calif. U.S. 2,791,343, May 7. A removable closure-cap assembly adapted to seal a container having an opening formed with a bead comprising a base member having a flat portion adapted to fit over said opening and a cylindrical portion extending at right angles from said flat portion, a cap member having a hollow cup shape and having its inner walls threaded near the base of said cup.

Dispensing Carton, Oscar L. Vines (to Continental Paper Co., Ridgefield Park, N.J., a corporation of New Jersey). U.S. 2,791,356, May 7. A blank capable of being folded to form a dispensing carton, said blank being formed with six spaced parallel fold lines extending transversely across the blank to define serially four side-wall panels, glue-flap panels, and partition panel, top and closure panels.

Combination Closure and Disappearing Pouring Spout Construction, Harry W. Nelson, Rockford, Ill. U.S. 2,791,357, May 7. In a telescopic discharge spout construction a formed sheet-metal neck defining a thread on its exterior of one diameter and a complementary thread on its interior of a smaller diameter.

Dispensing Container, George W. Wigert, et al., (to American Can Co., New York, N.Y., a corporation of New Jersey). U.S. 2,791,359, May 7. A hermetically sealed dispensing container,

comprising a cylindrical body, a single imperforate countersunk end member secured to an end of said body in an end seam having an inner annular wall and a rotatable closure member.

Partitioned Shipping Container, Jay H. Nute (to the Patent and Licensing Corp., New York, N.Y., a corporation of Massachusetts). U.S. 2,791,362, May 7. A container comprising side and end walls and eight flaps folded from said side and end walls and forming the top and bottom of the container, portions of the four inner end flaps being adapted to fold inwardly from both top and bottom so as to form two partition members dividing the container into three sections, and an additional folded one-piece slotted partition member having a double-thickness center portion lying parallel to and between said partition members and four flaps folded at right angles from said center portion and having slots adapted to interlock at right angles with said inner end flap members thus dividing the container.

Boxes, Paul F. Boevey, Minneapolis, Minn. U.S. 2,791,363, May 7. A box blank for forming a box having a body and a wing of less height than the body extending angularly therefrom to form a right therebetween, said blank consisting of an elongated substantially rectangular sheet of material having two longitudinal scores and five transverse scores.

Dispensing Containers Having Strong End Closures, Frank D. Bergstein, et al., (to Bergstein Packaging Trust, a trust composed of Robert Bergstein et al., trustees, Middletown, Ohio). U.S. 2,791,364, May 7. A blank for a one-piece tubular container of rectangular cross section comprising a sheet of paperboard cut and scored to provide four body wall panels and a glue lap in side-by-side articulation, bottom closure flaps and top closure members.

Nestable and Stackable Fibreboard Container, Isadore Cohen, Brooklyn, N.Y. U.S. 2,791,365, May 7. A container comprising a rectangular-shaped receptacle having pairs of opposed walls and endless stacking frames movably connected to one pair of walls.

Packing Case, William Geisler, (to Wilbro Corp., Hackensack, N.J., a corporation of New Jersey). U.S. 2,791,366, May 7. A collapsible packing case comprising a sheet of paperboard cut and scored to provide integral bottom, side and end walls, with the end walls consisting of rectangular flaps projecting from the ends of the bottom and side walls with score lines at base of flaps.

Collapsible Container, Robert R. Mcford, Lebanon, Ind. U.S. 2,791,367, May 7. A container for powdered food prod-

ucts to which water is added prior to consumption, comprising a four-sided body having a normally collapsed portion, a pocket formed in the wall of at least one side of said portion and rigid locking means.

Collapsible Box and Handle Therefor, Joseph Kramer, et al., (to The Gardner Board & Carton Co., Middletown, Ohio, a corporation of Ohio). U.S. 2,791,368, May 7. A collapsible box having top and bottom portions formed integrally from a single flat blank, each of said top and bottom portions having opposite side walls, a front end wall and a common rear end wall, adjacent side walls of the top and bottom portions having in integral flap connection scored to provide for erecting of said box.

Means for Protecting Packed Merchandise, Richard E. Paige, New York, N.Y. U.S. 2,791,369, May 7. A protective sleeve-like member of sheet material having two outer layers and parallel corrugations between said layers, said member having open ends and sections bent to form sides with edges parallel to said corrugations and transverse portions at one end of said member containing parts of said corrugations and bent to lie crosswise of said sides and folded against the inside of said member to form cushioning collar therein.

Containers for Small Parts for Radio and Television and the Like, William A. Ringler, et al., (to Federal Paper Board Co., Inc., Bogota, N.J., a corporation of New York). U.S. 2,792,111, May 14. A package of a plurality of small articles such as radio resistors having body portions and wire leads extending therefrom, comprising in combination: a pair of flat confronting sheets hinged together along their lower edges, said sheets being normally in face-to-face engagement with each other, each of said sheets having an upper and a lower section hinged together, each sheet having an elongated slot located adjacent to and extending in the direction of the juncture between said upper and lower sections.

Packing of Yarn Packages, Jefferson P. Ellis (to Celanese Corp. of America, New York, N.Y., a corporation of Delaware). U.S. 2,792,112, May 14. A packed carton comprising an outside casing of corrugated board, a plurality of wound yarn bobbins arranged in superposed layers, said bobbins having axial passageways, flat trays supporting said layers of bobbins, said trays comprising pairs of flat pads of corrugated board secured to each other in face-to-face relation to form a unitary structure.

Can Carrier, Harold G. Zastro, (to Waldorf Paper Products Co., Ramsey County, Minn., a corporation of Minnesota). U.S. 2,792,146, May 14. A can

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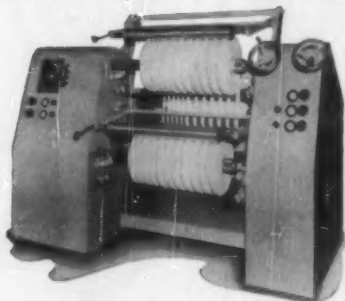
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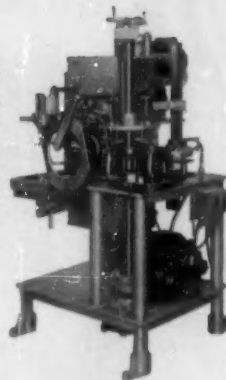
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carrier blank including a series of four panels including a top panel, an outer wall panel, a bottom panel and a partition wall panel foldably connected along parallel fold lines, a glue flap hingedly connected to said top panel and foldable into surface contact with said partition wall panel.

Collapsible Capless Tube for Tooth Paste or the Like, Joseph M. Lutz, New York, N.Y. U.S. 2,792,149, May 14. A capless tube for fluent, pasty substances, comprising a thin-walled collapsible plastic tube body, a neck thereon and a resiliently deformable head having a permanent connection to the neck, said head including a pair of opposed, convergent side walls and a pair of opposed convergent top and bottom walls.

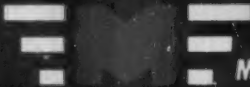
Container Closure, Fred G. Thomas, Somerville, N.J. U.S. 2,792,161, May 14. Container closure for a container having a flaring top and a neck with an outlet bore, said closure comprising a hollow plug slidable in said bore and having a bottom inlet and a side outlet, resilient wings comprising flat strips no wider than the internal diameter of said neck outlet bore and integral with said plug on respective opposite sides thereof.

Consumer-Type Container, Lewis C. Brooks, Milwaukee, Wis. U.S. 2,792,166, May 14. In a consumer-type container of the character described, comprising a tubular body formed from paperboard and having flat side walls and angular corners, an end-closure supporting ledge on said side walls, said ledge being flush with one end of the body and being formed as an integral part of said side walls by the bending of strips connected thereto.

Dough Package and Method of Making Same, William F. J. Fienup, et al., (to R-C Can Co., St. Louis, Mo.). U.S. 2,793,126, May 21. A dough package comprising a container with dough contained therein and constructed to permit said dough to be bodily removed therefrom without mutilation, said container comprising a lined inner fibrous paper body forming a generally cylindrical casing and having a generally helical separation line extending substantially the full length thereof and pitched to extend helically around substantially the complete circumference of the container and a removable outer reinforcing helically formed wrapping superposed about said inner body and detachably adhesively held to the outer surface of said inner body.

Cutting and Feeding Devices, Charles P. Dyken, West Bend, Wis. U.S. 2,792,890, May 21. A sheet-material cutting and feeding device adapted to be used with a wrapping machine, said device comprising a horizontal platform, a pair of shafts rotatably mounted along opposite edges of said platform, rollers fixed on said shafts and a plurality of endless delivery conveyers trained over said rollers.

Dispenser for Safety-Razor Blades, Charles E. Butlin (to American Safety

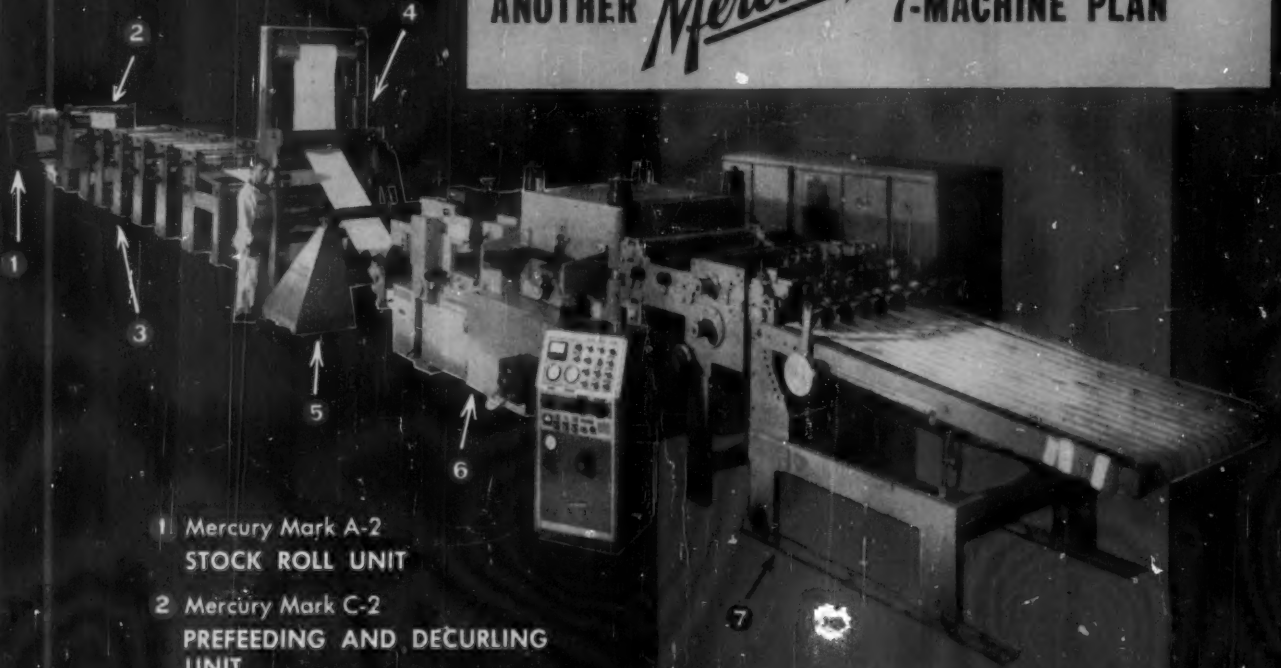


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Razor Corp., Brooklyn, N.Y., a corporation of Virginia). U.S. 2,792,933, May 21. A dispenser for safety-razor blades comprising a generally rectangular new blade containing upper chamber member having a top wall, depending front, rear and side walls, and an open bottom for receiving used blades.

Container Handle, Lawrence A. Beyer, (to the Haynes Mfg. Co., Cleveland, Ohio, a corporation of Ohio). U.S. 2,792,958, May 21. A handle structure adapted to be used with a bottle container having a neck portion comprising a collar having diametrically disposed ears, each provided with a key-shaped opening.

Pressure Vessel Construction, Earl E. Schoessow (to Babcock & Wilcox Co., New York, N.Y., a corporation of New Jersey). U.S. 2,792,965, May 21. A high-temperature pressure vessel construction comprising a vertically elongated pressure vessel subject to a high temperature and having a circular horizontal cross section and a metallic laminated cylindrically shaped skirt having its laminations integrally secured to the pressure vessel and to each other by a common securement in heat-transfer relationship and extending beyond one end of said vessel for the support thereof.

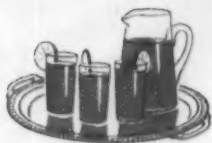
Closures for Liquid Containers, Oscar B. Yorker, Denver, Colo. U.S. 2,792,975, May 21. A closure for liquid containers comprising a pouring spout having a tapered upper end portion provided with a discharge opening at its free end and having an annular rib extending completely and uninterruptedly therearound.

Container and Spout Therefor, Hall Stewart, Danville, Ill. U.S. 2,792,796, May 21. A spout for a container adapted to be attached to a wall thereof and extend outwardly through an opening therein comprising, a spout base of plastic material adapted to extend through said opening and including an inner end, an outer plastic flange integral with said base.

Partition Tray, George V. Malmgren, Chicago, Ill. U.S. 2,792,982, May 21. A blank for forming a partition tray comprising a substantially rectangular sheet of foldable paper, said sheet having a plurality of cut and scored lines therein to form a plurality of transversely extending tabs.

Tea-Bag Construction, Clarice E. Nelson, et al., Oakvale, Calif. U.S. 2,793,594, May 28. A device for use in conjunction with receptacles containing warm beverage infusions comprising a fluid pervious container having a mass of beverage material to be infused, a tag, a string connecting said tag to said container, an adhesive on the tag adapted to detachably secure said tag to a wall surface of a receptacle with said container positioned in said receptacle, a layer of material detachably adhered to said adhesive.

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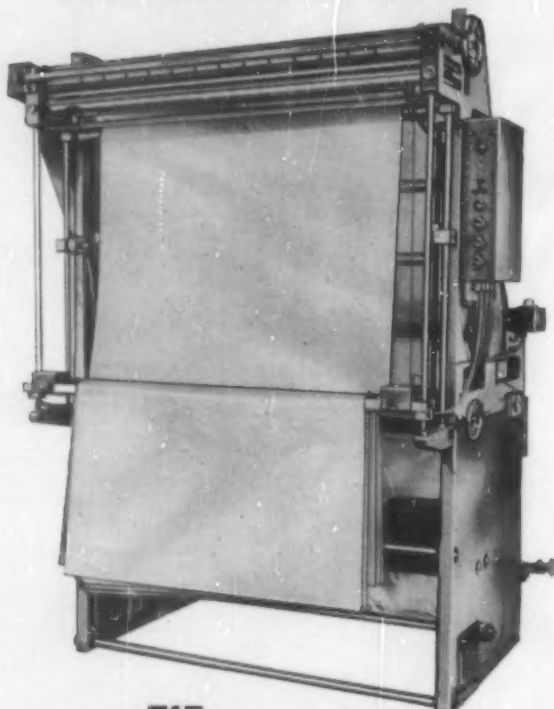
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U. S. patents digest

Austin E. Davis (to Nashua Corp., Nashua, N.H., a corporation of Massachusetts). U.S. 2,793,966, May 28. Remoistenable gummed paper comprising a paper base having adherent to a face thereof a potentially adhesive solid film which when moistened by water develops in the film an adhesive tackiness permitting securing the material in a position of use.

Leakproof Dry Cell, Allison M. MacFarland, (to P. R. Mallory & Co., Indianapolis, Ind., a corporation of Delaware). U.S. 2,794,060, May 28. A dry cell comprising a zinc cup constituting an electrode, a mass of mix and a central gas-permeable carbon electrode within said cup, a soft plastic inner seal and an outer steel jacket.

Tape Cutter and Holder, Clarence W. Vogt, Norwalk, Conn. U.S. 2,793,694, May 28. As an article of manufacture, a tape cutter comprising a body portion having a re-entrant portion, a cutter head having a cutter thereon mounted in said re-entrant portion, means on said body portion to secure the cutter head in a desired position, a flexible tongue secured to the cutter head adjacent the last-named means to engage adhesive tape advancing to the cutting head, a snubber element on said body portion to engage the side of the tape opposite from said tongue to press the tape between them.

Sealed Package, Frank J. Lefebvre (to Ivers-Lee Co., Newark, N.J., a corporation of Delaware). U.S. 2,793,743, May 28. A sealed labeled package comprising at least three superposed rectangular layers of packaging material, one of which is shorter than the other two layers, said layers having been sealed together along the side and bottom edges thereof to provide a bag-like commodity-receiving compartment open at the top end.

Collapsible Shipping Container, Mercer D. Walklet, et al., (to The Hamlin Metal Products Corp., Akron, Ohio, a corporation of Ohio). U.S. 2,793,780, May 28. A collapsible container including a rectangular base having vertically disposed side and end flanges, opposed end walls hinged to said end flanges for swinging over the base, opposed side walls extending between the end walls in erected position, said side walls in erected position detachably engaging over said side flanges, means on the end walls detachably locking the top portions of said side walls in erected position and hinge connections between the bottom ends of said side walls and the base.

Combined Shipping and Display Box, Peter S. Scaturro, (to Arvey Corp., Chicago, Ill., a corporation of Delaware). U.S. 2,793,802, May 28. A combined shipping and display container formed of a unitary paperboard blank cut, scored and folded to define a substantially rectangular box when closed and distensible when open to an eight-sided display basket, comprising a rectangular bottom, opposed side walls, opposed end sections and a pocket therebetween.

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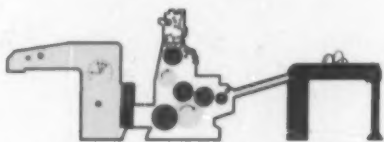
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PRESS: 35" x 45" Harris single color and 2 color
STACKING: Each 500 sheets separated by plywood board
AUXILIARY DRYING: None, except that dry offset spray
was used
SPECIAL FOIL INKS: Specially formulated for job by G.P.I.

Kaiser Aluminum

FOIL FOR PROTECTION... KAISER FOR FOIL

Film marble bags

Packaging children's marbles in polyethylene plastic film with automatic equipment has enabled Marble King, Inc., St. Marys, W. Va., to increase production by 67% while saving \$10,000 a year on materials.

Marbles were formerly hand



loaded into bags made of net cloth. Now, automatic machines fed by rolls of film form and seam bags, load marbles into them and heat seal the ends. Labels are stapled on.

Production averages 2,800 bags per hour, increasing the annual output by about seven million bags, with film costing \$10,000 less than an equivalent amount of the formerly used material.

In addition to giving the product better merchandising eye appeal, the tough, pliable bag is said to stand up longer in regular use.

Supplies and services: Polyethylene plastic film by Visking Co. Div., Union Carbide Corp., 30 E. 42 St., New York 17.

Atomic flavor guard

To produce beer-bottle crowns that are said to give better flavor to the brew, Armstrong Cork Co. is using a new beta-ray gauge that checks the amount of adhesive applied to aluminum foil. Spots of foil are adhered to the cork liner to keep the beverage from contacting and causing slight deterioration of the cork composition.

The gauge uses Strontium 90 as a source of harmless radiation to project rays through the adhesive coating. Reflecting from the aluminum, rays are picked up by a detector that warns of any change in thickness of the coating. The radiation is said to have no lingering effect because it is quickly dissipated. This eliminates the need for constant manual checking.

Something
goes into
this box
besides tea bags.



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COMPANY, INC.
NATIONAL MORRIS
FOLDING BOX PAPER MILLS
DIVISION DIVISION

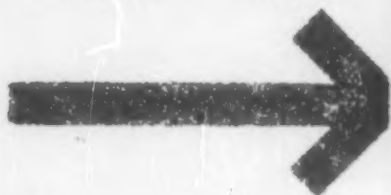
SALES OFFICES: NEW YORK, N. Y.; CHICAGO, ILL.; NEW HAVEN AND VERSAILLES, CONN.; ROCOSTA, N. J.; BOSTON AND PALMER, MASS.; CLEVELAND AND STEUBENVILLE, OHIO; PHILADELPHIA AND PITTSBURGH, PA.; MARION, IND.
FOLDING BOX PLANTS: ROCOSTA, N. J.; NEW HAVEN AND VERSAILLES, CONN.; PALMER, MASS.; COLUMBUS AND STEUBENVILLE, OHIO; PITTSBURGH, PA.; MORRIS, ILL.; MARION, IND. PAPER BOARD MILLS: ROCOSTA, N. J.; NEW HAVEN, MONTVILLE AND VERSAILLES, CONN.; MORRIS, ILL.; READING, PA.; STEUBENVILLE, OHIO; WHITE HALL, MD.

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**New designs like this-
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Want to expedite the introduction of a new product . . . or move into a market test quickly? You have a fist full of advantages in Plax stock plastic bottles. All Plax designs have been tested and proven — for visual appeal, size impression and functional efficiency as a dispensing package. We — and our experienced distributor organization — are ready to work with you in developing quickly a complete package that will move and keep moving off retail shelves.

Leaders in making plastics more useful

PLAX

PLAX CORPORATION • P. O. BOX 1019 • HARTFORD, CONNECTICUT

Britain's nucleonic fill monitor

[Continued from page 146]

of three. It is not always necessary, however, to employ more than one radioactive source. In the case of the vials, for instance, the detector can be arranged to cover the length of one row of three vials and can scan each row in turn. The absence of any one vial from its compartment would allow the passage of a stronger radiation to the detector and hence result in the operation of the warning light or buzzer.

A further application adopted very successfully in England is the filling of paperboard cartons with soap powder. In this case the package monitor system was compared with the method previously employed, namely, the use of a reflected light beam and photocell detector, and was found to be many hundred times more reliable. All the machines were therefore fitted with package monitors and very high accuracy is now obtained when inspecting cartons at a rate of 180 a minute.

The wide range of commodities to which the packaging monitor has already been applied or successfully tested includes breakfast cereals, canned vegetables, canned jam, beer, soup, liquid wax polishes, ointments, cakes, small engineering compon-

ents, cigarettes, ice cream, ammunition and many others.

All applications may be classified into three broad groups: (1) containers which are either filled or empty, e.g., when they have to contain one single item, (2) containers which are filled to a predetermined level, (3) containers which hold a predetermined number of items in a particular geometrical arrangement. Selection of the most appropriate set-up for any given case is based on the nature of the individual problem and the experience of Isotope Developments, Ltd., in solving such problems.

As the radioisotopes required as sources in the packaging monitors can be supplied as by-products of atomic reactors employed primarily for other purposes (e.g., the generation of electric power, the breeding of fissionable materials, or research and development programs), there should be no shortage of supply of radioisotopes for industrial applications. In fact, at the present time there is a surplus of radioactive by-products, many of which are disposed of as waste. Packaging inspection using radioisotopes may therefore be regarded as a technique with a very promising future.

New wrapless, linerless carton

[Continued from page 93]

maintains the carton seal now will withstand temperatures of minus 40 deg. F.

Considerable research was required to obtain this low temperature and to keep the adhesive in the machine at more than 300 deg. F. for proper application. This meant the installation of refrigerated compression units to replace conventional long-drying units to bring the temperature of the adhesive down rapidly enough for the quick setting essential to the high-speed production. It required the installation of pre-heater units preceding the gluing area to drive the wax on the flaps into the board to provide a surface against which the adhesive will bond.

No test data have been released, either by Morton's Frozen Foods or the carton and machinery suppliers,

as to the actual protective properties inherent to the finished packages. However, the fact that Morton's Frozen Foods already has one of the new cartoning machines in full operation and is installing another one shortly may be taken as evidence of satisfactory results.

One angle of obvious importance to consumers is the fact that cooking directions cannot be torn off and prematurely discarded, as is often the case with overwraps.

Optimism is running high for the new simplified cartoning technique, some sources suggesting that cartons sealed by this or a similar method could even be made liquid holding. Although this has not been recommended as yet, one machinery manufacturer reports that test packages have been made to hold water for a period of several days.



FOR IMMEDIATE DELIVERY ON STOCK PLAX BOTTLES

Call one of the Plax distributors below. Each carries full inventories of our stock containers — from 1/4 ounce to 13 gallons.

Albuquerque, N. M.	S. Riekes & Sons
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Baltimore, Md.	Atlantic Glass Co.
Boston, Mass.	S. H. Ansell & Sons
Brooklyn, N. Y.	J. Rabinowitz & Sons, Inc.
Buffalo, N. Y.	Empire State Bottle & Barrel Co.
Buffalo, N. Y.	Prince Rubber Co., Inc.
Chicago, Ill.	Continental Glass Co.
Cincinnati, O.	White Container Co.
Cleveland, O.	L. S. Kaufman & Sons
Columbus, O.	Ohio Container Co.
Dallas, Tex.	S. Riekes & Sons
Des Moines, Ia.	S. Riekes & Sons
Detroit, Mich.	M. Jacob & Sons
Jacksonville, Fla.	Smith Bottle Supply Co. of Jacksonville, Inc.
Kansas City, Mo.	S. Riekes & Sons
Louisville, Ky.	Peter & Co.
Los Angeles, Calif.	S. Riekes & Sons
Memphis, Tenn.	Wurzburger Bros., Inc.
Milwaukee, Wis.	W. B. Bottle Supply Co.
Minneapolis, Minn.	S. Riekes & Sons
Minneapolis, Minn.	Twin City Plastic Package Co.
Oklahoma City, Okla.	S. Riekes & Sons
Omaha, Neb.	S. Riekes & Sons
Philadelphia, Pa.	Zuckerman & Honickman, Inc.
Pittsburgh, Pa.	Samuel Mallingier Co.
Rock Island, Ill.	S. Riekes & Sons
St. Louis, Mo.	Northwestern Bottle Co.
San Antonio, Tex.	S. Riekes & Sons
San Francisco, Calif.	S. Riekes & Sons
Syracuse, N. Y.	Empire State Bottle of Syracuse
West Hartford, Conn.	Industrial Safety Supply Co.
Wichita, Kan.	S. Riekes & Sons

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**Nothing
sells your
product
like a transparent
package... and**

cellophane creates more sales



SALES APPEAL OF CONVENIENCE. Gordon Foods, Inc., Atlanta, Ga., gives its customers double assurance of freshness protection. One of the most popular items in the Gordon line is the "twin-pack" fractional package... two separate bags inside a sparkling printed Du Pont cellophane bag. Chip lovers can eat half the contents while the flavor and crispness of the other half remains protected in cellophane.

In today's highly competitive markets, only a transparent package works so hard to sell your product. And only a package of versatile, crystal-clear cellophane offers you so many features that create real sales appeal!

Du Pont cellophane shows the fine products you make at their very best . . . protects and keeps them at the peak of freshness . . . helps you increase volume through smart packaging techniques keyed to consumer convenience.

And . . . of course . . . cellophane has no equal for smooth, high-speed packaging at low cost. To find out more about how a package of Du Pont cellophane can

help you sell your products better, contact your Du Pont Representative or Authorized Converter of Du Pont cellophane. E. I. du Pont de Nemours & Co. (Inc.), Film Department, Wilmington 98, Delaware.

SPECIFY DU PONT cellophane by code designation when you order. That way, you'll be assured highest-quality film, product of Du Pont research and experience. Du Pont manufactures over 100 varieties of cellophane to meet your particular packaging needs.



BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

appeal... more ways than any other packaging material

Du Pont cellophane offers you all these packaging and selling advantages



SALES APPEAL OF VISIBILITY. Leading bakers, like the Fischer Baking Co., Newark, N. J., know that bread sells better when it can be seen. That's why the sale of 100% clear cellophane for white bread is increasing at an average rate of 25% a year.



SALES APPEAL OF MULTIPLE PACKAGING. Kimberly Clark Corporation, Neenah, Wis., knows that smart shoppers like to economize . . . now sells far more Kleenex Tissues by packaging 8 individual pocket packs in sparkling, printed Du Pont cellophane.



SALES APPEAL OF QUICK OPENING. The New England Confectionery Co., Cambridge, Mass., adds convenience to taste appeal . . . makes it easy for candy buyers to enjoy their favorites with efficient cellophane tapes that quickly, neatly open the package.



SALES APPEAL OF PROTECTION. Long Island Banana Co., Richmond Hill, N. Y., reports 2 to 5 days' extra selling life . . . greatly reduced banana bruising since adopting a printed Du Pont cellophane overwrap. A product stays fresh, looks clean in cellophane.

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...designed for the needs of the future*

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CONTAINERS FOR SMALL ITEMS. Booklet discusses the advantage of using plastic vials for packaging small, hard-to-handle items, such as pills, powders, small machine parts, cosmetics. Lusteroid Container Company, Inc. (H-788)

PRINTING OF TAPES. Illustrated folder discusses rotary printing machines for printing kraft, foil, metallic, pressure-sensitive, gummed, ungummed, cloth tapes in one or two colors. John McAdams & Sons, Inc. (H-789)

STOCK PLASTIC BOXES. Illustrated folder shows patterns available for line of transparent rigid plastic compart-

mented and un-compartmented rectangular and oval hinged boxes. The Vichek Tool Company. (H-790)

PRE-PRINTED LABELS. Catalog folder contains illustrations and prices for company's pre-printed and blank pressure-sensitive labels suitable for price marking. Paramount Paper Products Company. (H-791)

MULTI-UNIT CAN LOADER. Folder describes automatic unit that bands two, three or four cans together, and loads at speeds up to 50 cartons a minute. Provides mechanical data. Container Corporation of America. (H-792)

Any of the booklets described here, plus many others—forty-two in all—are available for the asking, without charge or obligation.

Just turn to the Manufacturers' Literature page in this issue (it's printed on heavy paper), circle the numbers corresponding to the booklets you want, fill in the reply postcard, and mail. No postage needed.

We'll see that your requests are routed promptly to each of the companies involved.

A Service Of MODERN PACKAGING A Breskin Publication
575 Madison Ave., New York 22, N. Y.

Uniform price spot

Adopting 23 specific recommendations for price marking of food packages at retail level highlighted the summer meeting of the Inter-Industry Food Packaging Committee. Hailed as the "first scientific study" of the price-spot problem, the recommendations are the result of a survey by the National Assn. of Retail Grocers which was conducted with the aid of Booz, Allen & Hamilton, management consultants.

The awaited report* was made on June 11 at the IIFPC's half-day session held in Chicago's Palmer House. Presentation was made on behalf of NARGUS executive secretary, Marie Kiefer, by W. T. Dahl, retailer from Des Moines, Iowa. In general, the report stated that the price spot should be on the front, upper right corner of the package and/or the top of the package. Specifically, the NARGUS and IIFPC recommendations are:

1. Where possible, the spot should be 1 in. in diameter.
2. On single-layer pack (cans), price spot should be on top center.
3. On multi-layer packs, price spot should be on top and bottom (center), or on top if two-layer pack to be opened by "zipper" method and top layer is packed upside down.
4. There should be no three- or four-layer packs of canned items, but if so, price spot should be on both top and bottom center.
5. On bar soap, price spot should be on both ends of package.
6. On toilet tissue, price spot should be on top and bottom.
7. On facial tissue, spot should be on ends of boxes.
8. On cello-pack items such as spaghetti, macaroni, etc., spot should be in upper right on face of package. (This does not allow for fastest marking, but eliminates danger of cutting through cellophane when cutting case.)
9. On cello-wrapped rice, price spot should be on top (rather than on face), if it is solid enough to receive mark and is packed so all tops are face up when case is opened.
10. On cello-wrapped beans, price spot is best on upper right of face of package (for same reasons as on

*See "The Urge to Simplify," MODERN PACKAGING, June, 1967, p. 101.

spaghetti and macaroni). If these items are packed in shipping container in same manner as rice, and is solid pack, then spot should be on top of the package as is recommended in the case of rice.

11. On 5 lbs. and 10 lbs. sugar, spot could be either on top or upper right on face, depending on packaging, since marking could easily be accomplished in either place.

12. On cello dried fruits, price spots should be on both sides of identification (saddle) label.

13. On solid-pack dried fruits, price spot should be on both ends of package. For thin packages, price spot on upper right of face is best.

14. On bottled merchandise (such as cleaners, furniture polish, etc.) cap should be left clear for plain pricing.

15. On gelatine and puddings, price spot should be on both ends of package.

16. On butter and margarine, price spot should be on upper right of face of package.

17. On frozen vegetables and fruits, price spot should be on upper right face of package and $\frac{1}{2}$ in. from edge of package.

18. On bread, price spot should be on seal end.

19. On boxed cakes, rolls and other bakery items, price spot should be on upper right of face.

20. On tray pack with overwrap, price spot should be on seal end.

21. On milk and cream container, price spot should be on top of square container and on "tent" in case of container with "pitcher-pour" type of top.

22. On cottage cheese, sour cream and other similar dairy products, price spot should be on top.

23. On magazines and records, price spot should be not less than 1 in. in diameter and in upper right on face. (Where price is printed on these items, it should be in figures and readable type face.)

Dahl pointed out that acceptance of these recommendations by packagers would help cut in-store handling costs.

Copies of the complete report on price-spot recommendations, the second such extensive report on food packaging, may be obtained for \$1 a copy from Merrill Maughan, chairman, Inter-Industry Food Packaging Committee, Room 604, 520 N. Michigan Ave., Chicago 11.

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More and more packaging men are discovering that Steel Engraved Cylinders give them the printed package they are looking for. Converters are impressed with the way they out-last all other printing techniques and the fact that every impression is as perfect as the first—even after 3 or 4 years of continuous use! Moreover when printing critical materials you can be confident of perfect results with chromeplated steel.

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Make your next impression a permanent one—make it a steel engraved cylinder by Vitra-Tone. Write today for prices and details.



Too many words

Packages that "talk" too much are usually designed to sell the boss instead of the customer, in the opinion of Albert Kner, director of package design, Container Corp. of America.

Kner told a recent meeting of the Sales Managers' Assn. of Philadelphia that "A package is a salesman. But, unlike the human salesman, a package cannot appeal to the ear or the intellect, only to the eye. When you sell to the eye, design and color are your most effective sales tools. Words perform a secondary function."

Pointing out that the average person sees 100,000 packages in his lifetime, he said, "If we stopped to read long-winded messages on them all, we wouldn't have time to consume their contents."

Kner said that packages should be designed after answering two questions:

Why does the customer buy the product and how is the product displayed in the store?

The package must be designed to appeal to the customer and to make the most of the display space given it, he stated.

In discussing the value of associating product with ultimate use, Kner cited a case history of an eastern brewer. "This package showed an empty beer glass ringed with foam," he said. "According to the brewmaster, rings were the sign of good beer. Unfortunately, the public doesn't know this. While the package delighted the brewmaster, it didn't sell beer."

"The brewery switched its package illustration to a color photograph of beer in an attractive food setting and sales picked up accordingly," he said.

As an example of how not to use display space, Kner cited cereal packages: "More than 50% of all stores display the end of cereal packages—not the front. Yet cereal manufacturers invariably use major sales appeals on the front of their packages."

Modern package designers use scientific equipment to gauge the selling power of a package, Kner said. "This equipment tells us what elements attract the customer, but it cannot make your packaging decisions for you."

COLOR
attracts
sales-

when it's engineered by



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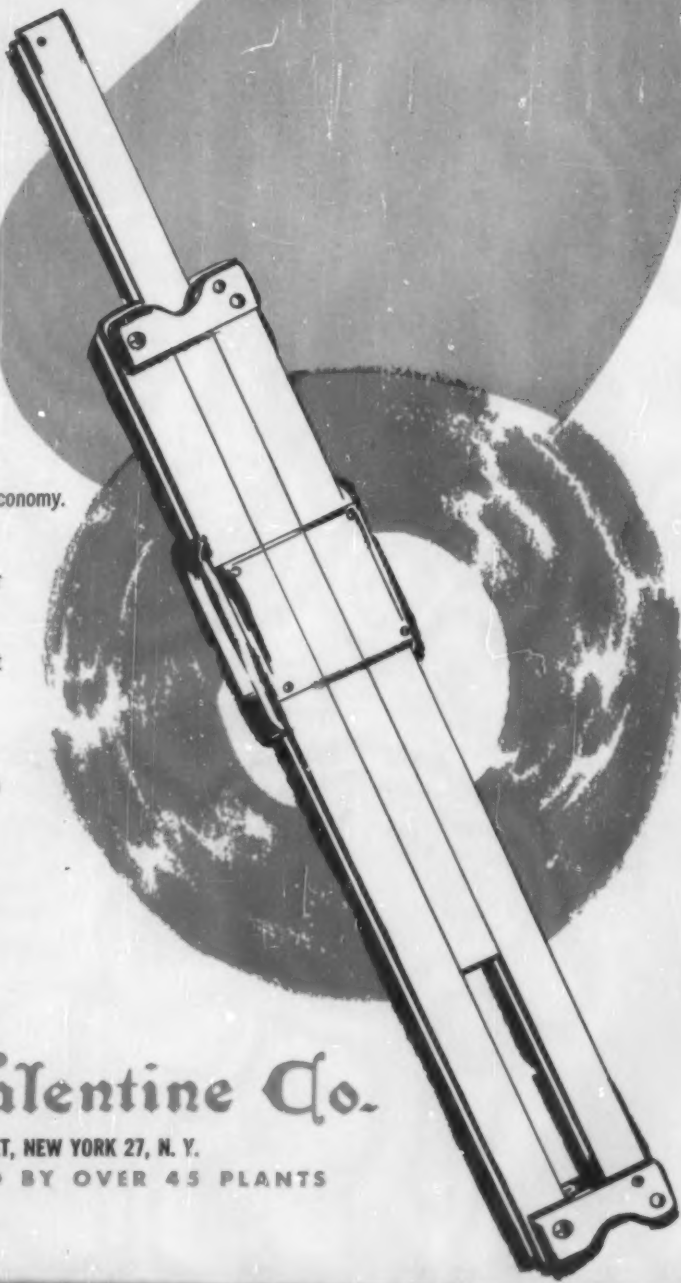




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You can't beat S&V color for added dimension and sales appeal! And, you can't match S&V inks for top press performance on any job you run! You're assured of these effective results because every pound of S&V ink is pre-engineered for premium performance and maximum economy. It's these characteristics, "built-in" during the quality-controlled manufacturing process, that make S&V the superior printing ink. And it's this same careful engineering approach that produces S&V's extra economy—a mileage bonus that lowers your unit cost with more impressions per pound, while meeting your specific requirements. Why not join other advanced printers who have discovered the advantages of S&V's engineered color! Remember, with today's inks—
for real economy... for top performance...
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79% of beer packaged

Packaged beer sales today account for a whopping 78.9% of the American brewing industry's total sales, an increase of nearly seven-fold since relegalization, the 1957 Brewers Almanac discloses.

The eighth annual edition of the almanac has just been published by the United States Brewers Foundation, the 94-year-old organization whose members produce 85% of the nation's malt beverages.

Last year, the almanac reports, 67,088,333 barrels of the industry's sales of 85,099,446 barrels were in packaged withdrawals. This was 909,314 barrels or 1.4% more than went into packaged sales in 1955. This mounting trend from draught to packaged sales is expected to continue.

This trend has shown steady growth since 1934, when packaged sales represented only 25% of the industry's total sales of 40,034,907. By 1946, packaged sales accounted for 66.6% of total sales and in the next four years increased another 5.2%.

The almanac notes that the greatest increase in packaged sales has been in cans, which rose from 13.3% of total sales in 1949 to 28.1% in 1956. Bottles remained fairly constant, ranging between 50 and 60% of total.

The brewing industry was a \$325 million customer for the manufacturers of beer containers last year, increasing its purchases 8% or \$25 million over 1955.

The brewing industry currently ranks as the third biggest customer of the bottle manufacturers in units purchased and second only to fruit and vegetable canners as a customer for metal cans.

Last year the nation's breweries purchased 7,903,386,000 cans at a cost of approximately \$265 million, compared with purchases of 7,458,910,000 cans for some \$250 million in 1955.

The brewing industry's purchases last year of 1,542,000,000 bottles, amounting to \$60 million, were virtually unchanged from 1955.

All told, more than \$3 billion were distributed directly among American farmers, workers, business and Government last year through operations of the brewing industry, according to the almanac.

Bracon

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Cheese Tube Pleases...because it Squeezes

New! Different and ever so practical... that's CHEEZ PRESTO, a soft cheese topping for cooked foods, salads, canapes and snacks, now being introduced by Swift and Co.

It's the squeeze-to-use utility of the BRACON plastic tube that enables the housewife to lay strips of cheese just where they're wanted... quickly, easily, and no utensils to wash afterwards. Always soft and ready to use... all three flavors of CHEEZ PRESTO store safely at room temperature.

There are other advantages to BRACON squeeze-to-use packaging. Test market and panel tests repeatedly show that housewives desire the extra convenience of these functional packages which come to them at no extra cost. Attractive printing and unique point-of-sale displays catch their eye... the soft pliable polyethylene intrigues their touch... invites usage.

BRACON plastic tubes, bottles and cans are now packaging nationally branded products of all types. They are equally adept for creams, liquids or powders. If your merchandising needs a packaging pick-up, investigate BRACON squeeze-to-use containers, today. They're new!



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EXACT WEIGHT SCALES assure top packing speed

Leading food packers, like Florida Frozen Food Processors of Miami, are finding the speed and accuracy needed for fast production packing in Exact Weight Scales. These precision scales are extremely sensitive to the finest degree for close weight tolerance, yet simple to operate and give dependable service. The easy-to-read dial of Model 273, above, provides 1 inch indicator travel equivalent to 2 ounces over or under established weight. Scales are specially anodized to resist corrosion. Write for complete details.

Exact Weight Scales are available in capacities for packaging units of any size or weight. Model 213, left, has 3-pound capacity with one inch indicator travel equivalent to one ounce over and under. There is a type and model available for almost every precision weighing job.



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Precision ink transfer and accurate plate rolls are the heart of your press. Fine rolls make the difference between ordinary press work and high quality.



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No-flex Plate Rolls are tubular for minimum weight, yet integral in construction for maximum rigidity. All surfaces are ground to guarantee closest tolerances on diameters and concentricity ... assuring true "kiss" impressions. Available with either steel or aluminum body.



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Meter ink in constant volume with minimum adjustment, permit higher press speeds with no loss of quality. Evenflo rolls are standard on all modern flexographic presses. New rolls to specifications, fast re-engraving on used rolls.

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PI Forum topics

The program for the Packaging Institute's 19th Annual Forum, to be held in New York, Oct. 28, 29 and 30, is beginning to shape up with the announcement of seminar sessions based on the theme, "Planning Tomorrow's Package—Today."

Experts are scheduled to offer the latest news in research and development on the opening day. The Production Line Seminar on Oct. 29 will feature discussions of the importance of planning, advantages of package and equipment standardization, effective scheduling and materials handling, and the packaging manufacturer's viewpoint on price, quality and service.

Packaging of drugs and pharmaceuticals will be treated in an all-day session also on the 29th. Subjects will include general and specific studies of packaging development, and the facilities, standards and personnel required to obtain satisfactory results. Use of plastics for packaging will also be discussed by several speakers.

Results of a nationwide survey by the Flexographic Printing Committee will be presented in a seminar on the 29th, with specialists reporting on new techniques; printing halftones, screens and Bendays on film; artwork; multicolor art and presswork for folding cartons; relation of equipment, supplies and inks to print quality, and consumer reactions to flexography.

A seminar on the uses of bleached board on Oct. 29 will examine the characteristics of the material, coatings and adhesives, printing and converting, heat-seal forming equipment and a number of specific packaging applications.

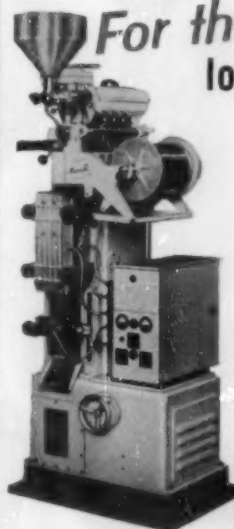
Methods for accurately measuring corrugated and fibre shipping containers will be featured at the seminar on corrugated containers on Oct. 30. Other subjects include the use of non-skid preparations on fibreboard containers, new single-face corrugated boxes and a check list for development of a fibreboard box.

The Bag and Bulk Seminar will examine stepped-end multiwall bags, multiwall-bag test methods, can handling methods for cost reductions and increased speeds, and industrial bulk packaging that now includes 15-ton unit containers.

*For the consumer—
attractive, convenient packaging*



*For the manufacturer—
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The Hansella 131 Universal Packaging Machine gives you this double benefit. A high production unit, the Hansella 131 produces fin-seal type packs—the handy, disposable packages that are becoming increasingly popular with today's shoppers.

From the printed roll to the finished, filled bag—done automatically in one operation on the Hansella 131.

	Width of Bag	Length of Bag	Production Rate
Simplex	1½" to 6"	2" to 6"	Up to 60 per minute
Duplex	1½" to 3"	2" to 6"	Up to 120 per minute

PRODUCTS Liquids, semi-liquids, powders, granules and solids.

FEEDS Pump, auger, volumetric feed, and electronic counter are available and easily interchangeable. The change-over can be accomplished in a matter of minutes—a big advantage for contract packagers or for in-plant packagers handling an extensive variety of products.

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Next packaging goal

Showing consumer-goods manufacturers how better packaging can reduce distribution costs should be the next target for the packaging industry, according to Gustav L. Nordstrom, executive director of the Folding Paper Box Assn. of America, Chicago.

Nordstrom told the 42nd annual convention of the Canadian Paper Box Mfrs. Assn. in Quebec recently that "It still takes too many hands to move goods from manufacturer to consumer, to sort packages, mark and price products, check stock and take inventory, move goods from stock room to selling counter and transport goods to the consumer's home.

"To its primary role as a 'silent salesman,' the package must add the ability to cut handling costs," he said, suggesting that there is much to learn from supermarkets, whose 322% sales increase in the past decade has been "due primarily to the winning combination of self service and packaging." Through rack jobbers, blister packs, multipacks and other ingenious packaging ideas, he pointed out, alert manufacturers are selling "amazing quantities" of non-food merchandise through supermarkets.

Calling packaging "the new dimension in profitable retailing," he noted that:

▶ Drug stores that rely largely on self service make double the profits of traditional service stores;

▶ Variety stores with check-outs have an automatic salary-expense saving of 3%, which means almost doubled profits;

▶ In the past 10 years, food stores have maintained profit margins by increasing volume, and

▶ Self service has made it possible for per-employee sales in food stores to jump from \$7,000 in 1940 to \$47,588 in 1956.

Nordstrom predicted that department stores will also sharply reduce their distribution costs as they abandon traditional concepts and turn to self selection and packaging. He said that an FPBA survey of department stores showed 14 ways in which costs of marking, stacking, handling and storage can be reduced by using machines to handle items in packages that are now handled in bulk by hand.

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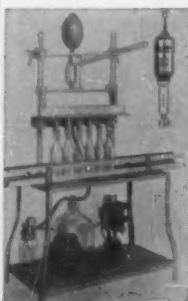
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Frozen fish in cans

The use of metal cans to package frozen fish has been suggested by Continental Can Co. on the basis of studies by that company, the U.S. Fish and Wildlife Service and leading seafood packers.

Freshness of taste and appearance are said to be retained better and longer when frozen fish are stored in evacuated metal cans. By providing a hermetic seal against air penetration and moisture loss, the can is said to prevent oxidation, drying, loss of volatile flavors and loss of vitamins. Advantages of packing in metal were found to apply equally to fish and seafoods. Lobster and crab meat retained their tenderness more successfully when packed in cans, according to the findings of the study.

Packers of products suitable to both canning and freezing can store frozen fish in cans by simply substituting a freezing operation for the retort, according to the company. For the retailer, the can is said to offer the longest shelf life for frozen fish while maintaining maximum flavor of the product.

Training for efficiency

Down time in ice-cream packaging plants can be greatly reduced if personnel responsible for maintaining and adjusting filling machines are properly trained, according to a study conducted jointly by the Paraffined Carton Research Council and Anderson Bros. Mfg. Co., makers of ice-cream packaging equipment.

Harvey H. Robbins, executive secretary, said the council launched the project in an effort to determine how package makers can best help ice-cream manufacturers in effective packaging-machinery maintenance and service programs.

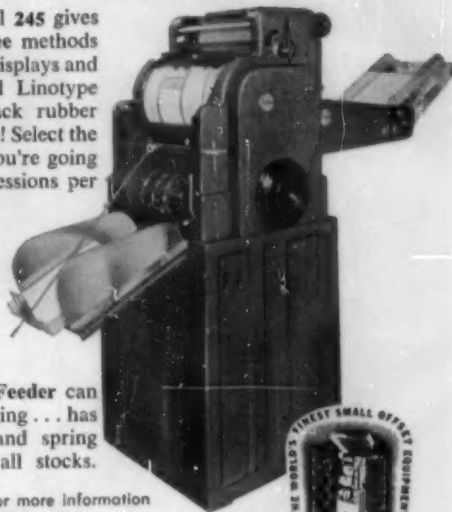
"Our surveys repeatedly demonstrate," Robbins said, "that plants in which complete responsibility for the equipment is given to a few trained individuals have the least number of problems."

He said that one outcome of the project will undoubtedly be the publication of a series of educational materials designed to broaden understanding of packaging equipment and material among ice-cream-plant employees.

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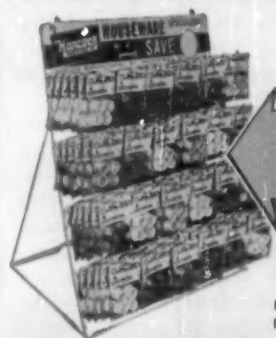
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Outdoor show of new packaging ideas

A new method of presenting and demonstrating new packaging materials and applications to prospective customers was successfully

up on the company's warehouse grounds. More than 7,000 users of packaging materials visited the "Vendorama" booths manned by



tested recently by the Zellerbach Paper Co. Div., Crown Zellerbach Corp., in cooperation with about 80 other manufacturers.

A line of open-front booths longer than three football fields was set

representatives of companies such as Diamond Match Co., Container Corp. of America, Olin Mathieson Chemical Corp., Kimberly-Clark Corp., Celanese Corp. of America, and Minnesota Mining & Mfg. Co.

A new fluorochemical repellent sizing

[Continued from page 143]

or oily products; white laminates for sharper, more attractive printing, and inexpensive waterproof wrapping which can withstand warehouse heat and grease contamination. There is good evidence, too, that asphaltting kraft can be made for maximum strength and economy with little concern for porosity if FC-805 treatment is used.

Treated paper and board also exhibit excellent wax "hold-out." Low treatment levels prevent unnecessary wax penetration, yet permit film continuity with good anchorage. This "hold-out" feature can mean complete retention of opacity and color after waxing, with potential savings in wax and pigment costs.

The combination of a thin film of polyethylene and an FC-805 treated kraft paper has been shown to possess grease resistance equivalent to that of materially heavier films of polyethylene on untreated paper. The use of a treated base paper also decreases pinhole and wicking failures. Tests indicate especially notable improvement in the case of oils which tend to migrate through polyethylene most readily.

FC-805 can make possible a new approach to the manufacture of grease- and water-resistant corrugated containers. Treatment can be applied on the corrugator so that separate operations of coating or laminating can be eliminated.

Treated cartons show good oil resistance and, since the liner actually repels oil, absorption of oil or grease from the packaged product is minimized. Water repellency can be achieved at a very low level of treatment.

Envelope and multiwall-bag tests now under way are furnishing evidence that FC-805 treated kraft has good oil resistance even in those cases involving appreciable pressure tending to force the grease through the sheet. Two-ply techniques are especially effective in the case of high pressure.

The studies described included only a few types of packaging materials; many other interesting areas are left to be investigated. The data obtained suggest that this new concept of sizing against oil and grease, molten asphalt and wax, and water as well, offers many practical possibilities. Fluorochemical FC-805 gives promise of a new approach to more functional, more versatile and more economical packaging.

References

1. Emlund, J. H., TAPPI, Vol. 40, No. 3: pp. 90A-96A (March, 1957).
2. "Paper Chemical FC-805," technical brochure, Fluorochemicals Div., Minnesota Mining & Mfg. Co.
3. TAPPI, Tentative Standard, T-45m-44—Turpentine Test for Grease Resistance.



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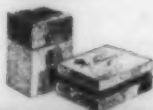
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FOR IMMEDIATE SALE: One MARKEM model 25A printing press and one MARKEM model 25AD-1 color, dial feed, printing press. Both these presses are in excellent condition and can be inspected in operation. Priced right for quick removal. Reply Box No. 697, Modern Packaging.

FOR SALE: One Kidder Aniline Press 4 colors, 33 inch web, complete with Controls, Motor Drive, Hydrowynd, Splicing attachment, Drying Oven, Scan-A-Web & Minneapolis Honeywell F. P. M. Indicator. Only three years old. May be seen in operation. Reply Box No. 699, Modern Packaging.

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MACHINERY WANTED: One color flexographic printer 36" web complete with unwind, rewind, chill roller. Advise price and also if machine can be seen in operation. Reply to Box No. 705, Modern Packaging.

Help Wanted

SALES REPRESENTATIVES: Manufacturer of new poly bag maker for converters wants coverage for Pacific Northwest, Upper State New York, E. Penna., S. N.J., Dela., Md. and Va. Prefer firms familiar with packaging equipment. Write outlining experience and listing lines now handling. Reply Box No. 692, Modern Packaging.

WANTED: Administrative Assistant, for flexographic printing plant, Eastern Converter. Requires individual age group 25 to 35. Interested in permanent position with growth company as Man Friday to Plant Superintendent. Experience in printing and bag making helpful. In lieu, knowledge of engineering will suffice. No degree necessary. Reply Box No. 693, Modern Packaging.

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SALES ENGINEER: Well established Chicago company now ready to open Eastern sales office. Representative must be thoroughly qualified in material handling related to automatic bag filling, and capable of assuming full responsibility for East Coast sale of bag filling equipment. Salary and expenses. Excellent future for right man. You are invited to write to present your background, experience and references that qualify you for this position. S. H. Bingham, Jr. Black Products Company, 13513 South Calumet Ave., Chicago 27, Illinois.

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WANTED: Salesmen with experience and contacts for Gravure and Flexographic printed holiday and box wraps. Steady position. Submit full information in first letter. Well-known New York Converter. Reply Box No. 703, Modern Packaging.

WANTED: ESTIMATOR AND SALES CORRESPONDENT with knowledge of figuring costs and selling prices of printed Cellophane, Polyethylene, Saran, Laminations, Acetate, in rolls, sheets, bags, etc. Must be in a position to correspond with customers and salesmen in the field. Permanent position for experienced and qualified person. Required by reputable converter, New York City. State all information in first letter. Replies will be held in confidence. Reply to Box No. 702, Modern Packaging.

SALES & SALES PROMOTION: Leading packaging company offers career opportunity to creative man to sell point-of-purchase display ideas to manufacturers of consumer goods. Degree plus 5 years' sales experience in advertising, printing, packaging, etc. Age 28-40. Starting salary \$8-\$10,000. Location NYC. Reply Box 704, Modern Packaging.

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Continued on page 216

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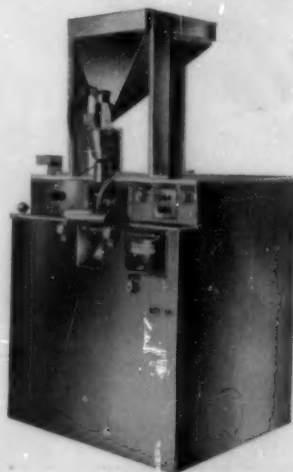
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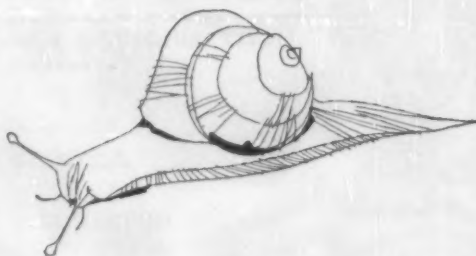
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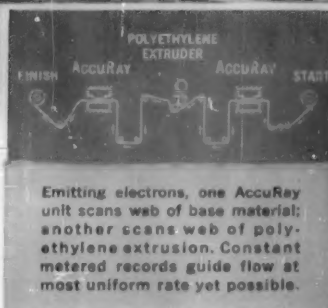
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